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REPUBLIC OF CYPRUS

The Second Five-Year Plan

(1967—1971)

11018

Cyprus.

PLANNING BUREAU
NICOSIA

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Foreword

THE Government of the Republic of Cyprus has since Independence embarked on development planning in the firm belief that in this way it will be possible to ensure the rational utilization of the Island's resources and to accelerate the rate of its economic development.

In spite of the political anomaly, during the First Five-Year Plan a satisfactory rate of growth was achieved and important strides forward were made in all sectors of the economy. But many are the obstacles which have still to be surmounted and many are the problems for which solutions have to be found if the economy is to be restructured and if conditions ensuring self-sustaining growth are to be created. Agriculture must be modernized, the problem of water has to be more effectively tackled, manufacturing industry should be stepped up, the exploitation of the Island's tourist potential must be more vigorously pursued. These are some of the priority fields in which increased emphasis will be given during the Second Plan.

The road to economic and social progress is uphill and difficult and much sweat and labour is needed if higher living standards are to be attained. But I look to the future with justified optimism. We have a hard-working population, a private sector which has displayed enterprise and initiative and a Civil Service which is rapidly adapting itself to the needs of a developing economy. I am confident that through concerted effort accelerated social and economic development and higher levels of prosperity can be realized. I earnestly wish that the present political anomaly may soon come to an end so that all the citizens of Cyprus may participate in the effort needed to realize the targets of the Second Plan and share in the resulting increased prosperity.

ARCHBISHOP MAKARIOS,
President of the Republic of Cyprus.

ACKNOWLEDGEMENT

This Plan has been the product of a long and arduous effort. The brunt of the work was borne by the small staff of the Planning Bureau working under the direction and guidance of Mr. A. C. Patsalides, Director-General of the Bureau. Government Ministries and Departments and Consultative Committees on which the private sector was also represented have contributed to this task by providing data and making proposals, suggestions or comments. Two economists from the Economic Commission for Europe, Mr. H. Durand and Mr. R. Notel, have rendered advice at various stages of the preparation of the Plan. To all the above and to all those who have in any way contributed to this task and made it possible for this work to come to fruition I extend my warmest thanks and deep appreciation.

R. SOLOMIDES,
Minister of Finance,
Chairman, Planning Committee.

THE SECOND FIVE-YEAR PLAN, 1967—1971

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CYPRUS WEIGHTS AND MEASURES USED IN TEXT

CURRENCY :

1 Cyprus pound (C£)=1,000 mils.

Par Value : As agreed with I.M.F. on 25th July, 1962.
C£1=2.48828 g. fine gold=U.S. $ 2.80=£1 sterling.
U.S. $ 1=C£0.357143. (¹)

WEIGHTS AND MEASURES :

The equivalents among the various systems used are indicated below :

Unit	Equivalents		
	Domestic	British	Metric
Length :			
1 Foot		12 inches	0.3048 meters
1 Meter		39.370 inches	
1 Mile		5,280 feet	1,609 meters
Area :			
1 Donum (Scala)	4 evleks	14,400 sq. feet (0.3306 acres)	1,377.8 sq. meters
Volume :			
1 Oke (liquids) ..		1.125 quarts	1.278 litres
Weight :			
1 Oke (weight) ..	400 drams	2.8 lbs.	1.27 kilograms
1 Ton	800 okes (weight)	2,240.0 lbs.	1.016 metric tons

(¹) With effect from the 20th November, 1967, the par value of the Cyprus pound as agreed with the I.M.F. is C£1=2.13281 g. fine gold=U.S. $2.40=£1 sterling.

PART I

Planning in Cyprus

CHAPTER 1

INTRODUCTION

1. Development Planning in Cyprus

1.1 Development planning is of recent origin in Cyprus. Although a development programme was prepared and launched by the Colonial Government soon after the Second World War, the real planning effort started after Independence. The principal purpose of planning has been to provide for the most efficient use of all human, physical, and financial resources within a framework of individual freedom and democratic institutions. Experience during the last fifteen years or so has shown that the market mechanism cannot be relied upon to ensure the desired restructuring of the economy and a sustained rate of growth. Without some Government intervention and participation, optimum economic and social growth will not be possible to achieve, and, what is worse, Cyprus may well be subject to a repetition of the economic turbulence and the ups and downs of the nineteen fifties. Given the scarcity of certain strategic resources, an optimum allocation as between alternative uses would be necessary and the market mechanism has been inadequate to ensure such allocation. Furthermore, in the case of Cyprus there are many exogenous factors influencing the economy and, although Government cannot control such factors, yet it can plan to minimize their impact on incomes, employment, and prices. But it does not follow from this that Cyprus lends itself for the establishment of a centrally planned and controlled economic system. For one reason, traditionally, Cyprus has had a large private sector. Too much control and licensing would stifle private initiative and might lead to inefficiency; and this would be particularly serious for Cyprus which will continue to have a large trading sector. Targets will have to be laid down, but, in the case of the private sector, the Government will try to influence their attainment largely through institutional, monetary and fiscal measures.

As compared with the First Five-Year Plan, which was largely concerned with development expenditure in the public sector, the Second Plan will have a wider scope, a more complete coverage, but " indicative " planning techniques will continue to be used and Government's economic weapons will continue to be pursuasive rather than compulsive. The Plan will be flexible, adaptable, and capable of modification in the light of changing circumstances. And in the ultimate analysis, the successful implementation of the Plan and the fulfilment of the Plan objectives will depend in no small measure on the co-operation and performance of the private sector.

2. Brief Review of the Economy in the Nineteen Fifties

2.1 The decade preceding the First Five-Year Plan was an abnormal period. The years from 1950 to 1957 were years of intensive economic activity and rising incomes. Gross National Product at current market prices rose from £39.5 million in 1950 to £86.6 million (1) in 1957, but there was also a considerable rise in prices (the retail price index stood at 154.7 in 1957 with 1950 as a base (100)) so that at constant 1950 prices the increase in Gross National Product was from £39.5 to £58.5 million. This rapid expansion in economic activity was largely engendered by a very steep rise in British military expenditure, much of which was related to the creation of a military infrastructure and most of which was financed by external sources. The period was also characterized by a very favourable trend in export prices for both copper and citrus fruit relative to import prices. During this period, capital formation increased appreciably although much of it went into automotive equipment and houses, which were intended to be rented to troops' families. Thus, the effects of the expansion generated growth in the construction and trade sectors of the economy rather than in agriculture, mining and manufacturing. A further result was a large increase in imports (especially of consumer goods). By the end of 1957, imports, as compared with 1950, had more than trebled and the trade gap widened from £2.4 million to £26.3 million.

2.2 By 1957, however, when military Base expenditure had declined, copper prices had fallen and the emergency had disrupted economic activity, and especially the tourist industry, the boom conditions had come to an end. Between 1957 and 1960 the Gross Domestic Product dropped by 10 per cent (1). Unemployment was rising and by 1960 the number of registered unemployed was about 6,000. Emigration rose sharply and in 1960 the number of emigrants reached the figure of 14,600. As a consequence of the contraction of economic activity, the uncertainty which was prevailing and the unstable political era surrounding the founding of the new Republic there was also a flight of capital which in 1960 was estimated at about £10 million. In 1961 economic activity began to revive and the Gross Domestic Product took an upward trend ; but the fundamental weaknesses of the economy were there.

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(1) Old series.

2.3 Thus, one of the first preoccupations of the Government on the morrow of Independence was to end the economic uncertainty, to halt the flight of capital and to lay the groundwork for economic growth. In pursuance of the latter objective, a team of United Nations experts headed by Dr. Willard L. Thorp was invited " to make an independent and objective study of the economic prospects for Cyprus in the light of its resources and to prepare recommendations to the Government of Cyprus for action looking towards the acceleration of its economic development "(1). Many of the suggestions of the U.N. team and of the proposals made by Government Ministries, economists and technicians were incorporated in a five-year programme of economic development enunciated in August, 1961(2).

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(1) U.N. : " Cyprus—Suggestions for a Development Programme ", New York, 1961.

(2) In 1963, an effort was made to refine this Programme and produce a more elaborate version for the remaining three-year period. In this connexion, valuable assistance was given to the Planning Bureau by a team of foreign economists from the Stanford Research Institute (made available under bilateral technical assistance arrangements) consisting of Dr. M. Yudelman, Dr. W. Snyder and Mr. P. Duncan as well as by Dr. E. C. Hald, Resident Representative of the U.N.D.P., and Mr. S. Fairmont, U.N. Economist. Because of the political anomaly which intervened, this work was not finalized, but some of the studies carried out at the time provided useful background material for the Second Plan.

CHAPTER 2

THE FIRST FIVE-YEAR PLAN, 1962-1966

1. Nature and Objectives of the Plan

As already mentioned, the First Five-Year Plan constituted the first real programming attempt in Cyprus, but, although it envisaged an ambitious investment target, it was largely concentrated in the public sector. The Programme provided for £62 million to be allocated from public funds during the period 1962-1966. The recommended level of direct public development expenditure was £57.2 million and the balance was to be provided by way of credit to the private sector for investment in Agriculture, Industry and Tourism. As to the purpose of this investment out of the £62 million, £57.9 million was to be allocated for investment in basic economic development projects and £4.1 million for social and other services and public buildings.

In the agricultural sector, the programme laid emphasis on increased productivity, land reclamation, the promotion of intensive cultivation by the extension of irrigation and the use of machinery and fertilizers, the encouragement of animal husbandry, and the promotion of mixed farming, the establishment of an Agricultural Research Institute etc. Because of the crucial role of water in the development effort, the Programme provided for heavy investment in the development, conservation and the proper utilization of water resources.

In the industrial sector the emphasis was on the creation of a climate conducive to the development of private initiative by the execution of infrastructural works and the provision of incentives and technical training, as well as on the establishment of appropriate credit institutions.

In the field of tourism, the Programme envisaged increased publicity and projection of the Island abroad, the creation of additional hotel accommodation and the modernisation of existing hotels, training of hotel staff, etc.

In the field of infrastructure proper, the Programme provided for port development, new airport terminal buildings, the improvement and extension of the road network, the development of telecommunications and the expansion of the electricity grid-system.

It was expected that this Programme would stimulate investment in the private sector and that the effect of this investment and of increased productivity would result in an average annual increase in Gross National Product of 6.2 per cent (or 5.5 per cent compound rate). The Plan was launched during a period of economic depression following the establishment of the Republic and its underlying philosophy was therefore twofold : firstly, to restore economic growth by mobilising unemployed resources ; and, secondly, to diversify the economy and make it less dependent on unstable sources.

2. Progress during the First Plan

2.1 In spite of the political anomaly which has prevailed since December, 1963, substantial progress has been made and many of the targets and objectives laid down in the Plan have been attained. The Plan envisaged an average annual rate of growth of 6.2 per cent (simple average) or 5.5 per cent (compound rate) (1). The national accounts estimates have since been revised and strict comparability presents problems, but on the basis of the official statistics published in the Economic Report(2) the average annual rate of growth between 1960 and 1966 was 6.8 per cent and the compound rate 5.9 per cent. Therefore, in so far as the pace at which the economy was expected to grow is concerned, the target laid down in the Plan has been attained and even surpassed. Per capita Gross National Product at constant 1966 market prices rose from £208.2 in 1961 to £258.4 in 1966(3). However, one of the basic features and policy objectives of the Plan was to restructure and diversify the economy, to make it less and less dependent on exogenous and unstable sources of income over which the Government has no control. This is a long-term objective and it was never expected that it would be attained within the relatively short period of five years. Appreciable progress has nevertheless been made in this direction, as the following Tables 1-3 indicate :

Gross Domestic Product by Sector, 1961 and 1966

TABLE 1. (*At Constant*, 1966 *Prices*)

	Values in £mln.		Percentage Share in Total	
	1961	1966 (3)	1961	1966
Agriculture, etc.	19.7	27.9	18.3	20.2
Mining and Quarrying	10.0	9.6	9.3	6.9
Manufacturing	13.2	16.8	12.3	12.2
Construction	5.2	7.5	4.8	5.4
Electricity, Gas and Water	1.6	2.5	1.5	1.8
Transport & Communications	12.6	16.7	11.7	12.1
Wholesale & Retail Trade	16.3	20.9	15.1	15.1
Banking, Insurance & Real Estate	2.4	5.0	2.2	3.6
Ownership of Dwellings	8.6	10.7	8.0	7.7
Public Administration & Defence	6.2	8.1	5.8	5.9
Services	11.8	12.5	11.0	9.1
GDP at 1966 Factor Cost	107.6	138.2	100.0	100.0
Plus Indirect Taxes	9.0	12.7		
Minus Subsidies	—1.3	—0.8		
GDP at 1966 Market Prices	115.3	150.1		

Source: Statistics and Research Department, Ministry of Finance and Planning Bureau.

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(1) The rate of growth was estimated using 1960 as a base year.

(2) Annual publication of the Statistics and Research Department, Ministry of Finance.

(3) Some of the National Accounts figures for 1966 (and previous years) are based on revised estimates and differ from those published in the Economic Report.

Distribution of Expenditure on Gross National Product, 1961 and 1966

TABLE 2. (*At Constant* 1966 *Prices*)

	Values in £mln.		Percentage Share in Total	
	1961	1966	1961	1966
Consumption (Private & Public)	101.5	129.7	84.6	83.7
Gross Domestic Fixed Capital Formation	15.9	27.5	13.2	17.7
Changes in Stocks	+ 1.8	+ 0.5	1.5	0.3
Exports of Goods & Services	37.5	51.1	31.3	33.0
Imports of Goods & Services	—41.4	—58.7	—34.5	—37.9
Expenditure on GDP	115.3	150.1	96.1	96.8
Net Factor Income from Abroad ..	4.7	4.9	3.9	3.2
Expenditure on GNP	120.0	155.0	100.0	100.0

Source : Prepared by the Planning Bureau on the basis of revised data provided by the Statistics and Research Department, Ministry of Finance.

Structural Shifts in Exports and Imports of Goods and Services 1961 and 1966

TABLE 3

Exports of Goods and Services			Imports of Goods and Services		
	Percentage Share in Total			Percentage Share in Total	
	1961	1966		1961	1966
1. Merchandise (fob) of which :—	53.0	54.0	1. Merchandise (fob) of which :—	80.9	81.8
1.1 Minerals ..	(28.0)	(23.9)	1.1 Capital Goods	(11.3)	(14.8)
1.2 Agricultural Exports	(23.7)	(28.2)	1.2 Raw Materials	(25.3)	(28.8)
1.3 Other	(1.3)	(1.9)	1.3 Consumer & Other Goods ..	(44.3)	(38.2)
2. Freight, Insurance & Other Transportation ..	2.7	2.2	2. Freight, Insurance & Other Transportation ..	11.8	11.9
3. Travel	9.3	7.0	3. Travel	5.8	4.9
4. Government n.i.e. ..	31.3	33.5	4. Government n.i.e. ..	1.0	0.9
5. Other Services ..	3.7	3.3	5. Other Services ..	0.5	0.5
Total	100.0	100.0	Total	100.0	100.0

Source : Planning Bureau.

Table 1 compares the contributions of the various sectors to the economy. It will be seen that the share of Agriculture has increased from 18.3 to 20.2 per cent and that, although the percentage contribution of Manufacturing has been maintained at the 1961 level, the contribution of the industrial sector as a whole (Manufacturing, Construction and Electricity) has increased from 18.6 to 19.4 per cent.

Table 2 bears testimony to the emphasis given during the Plan period on the stepping up of the investment effort. Thus, while the share of consumption in Gross National Product has been reduced from 84.6 to 83.7 per cent, the share of investment has increased from 13.2 to 17.7 per cent.

Table 3 shows the reduced share of minerals and the increased share of agricultural goods in exports as well as the increased importance of capital goods and raw materials and the reduced share of consumer goods in imports.

During the period under review, fixed investment reached a total of £115.8 million distributed among the various sectors of the economy as shown in Table 4.

Fixed Investment by Sector, 1962–1966(1)

(*At Constant*, 1966 *Prices*—£mln.)

TABLE 4

	1962	1963	1964	1965	1966	1962–1966	Percentage Shares in Total 1962–66
1. Agriculture, etc. ..	2.8	3.0	2.3	2.8	3.5	14.4	12.4
2. Mining and Quarrying	1.1	0.5	0.5	1.5	0.7	4.3	3.7
3. Manufacturing ..	1.7	2.5	2.2	1.9	4.1	12.4	10.7
4. Construction	1.1	1.2	0.6	0.9	0.9	4.7	4.1
5. Electricity, etc. ..	1.0	1.0	1.1	3.1	2.0	8.2	7.1
6. Transport & Communications	4.9	4.6	3.0	5.2	4.7	22.4	19.3
7. Wholesale & R.T. ..	0.8	1.1	0.6	0.8	1.4	4.7	4.1
8. Ownership of Dwellings	5.8	6.4	3.2	4.6	7.6	27.6	23.8
9. Public Administration & Defence	0.2	0.1	0.2	0.1	0.1	0.7	0.6
10. Other Services ..	3.2	3.8	3.0	3.9	2.5	16.4	14.2
Total	22.6	24.2	16.7	24.8	27.5	115.8	100.0

Government development expenditure amounted to about £27.0 million; in addition about £12 million were invested by quasi-Government bodies bringing the total public development expenditure (by Government and Public Corporations) to about £39 million. This is below the level of development expenditure envisaged in the Plan but it is undoubtedly a creditable performance if one takes into account the initial difficulties in running a newly established State, the lack of experience, of techno-economic studies, plans and concrete policies as well as the abnormal political situation prevailing since the end of 1963. But what is more important to bear in mind is that in mixed economies public expenditure has a compensatory role to play. It should be flexible and be varied depending on the performance of the private sector. This is necessary if the economy is to be maintained on an even keel and depressions and inflationary situations are to be avoided.

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(1) **Fixed investment estimates for 1962–66 comprise revised estimates made by the Planning Bureau. They differ slightly from published Economic Report figures.**

As indicated below, a very large proportion of Government development expenditure was financed from Government revenues and this became possible through the adoption of a policy of austerity in so far as consumption expenditure is concerned, as well as through an increase in taxes and an improvement in the efficiency of the tax collection system.

An important achievement of the five-year period is the fact that there was growth without inflation and such expansion as occurred was attained in an atmosphere of external and internal monetary stability. This was facilitated through the establishment in 1963 of a Central Bank which was entrusted with the task of fostering " monetary stability and such credit and balance of payments conditions as are conducive to the orderly development of the economy of the Republic ". Domestic cost and price increases were maintained within acceptable limits, while the overall balance of payments was consistently in surplus. With the exception of 1964, Government operations resulted in a surplus. Part of the growth of Government financial resources in this period was contributed by foreign aid, which amounted to £10.9 million. Taking into account both ordinary and development transactions, the overall budgetary surplus in the five-year period 1962-1966 totalled £7.3 million (see Table 5).

Government Revenue and Expenditure, 1961–1966

TABLE 5 *(At Current Prices—£ mln.)*

	1961	1962	1963	1964	1965	1966	1962–66
A. Revenue	20.2	21.7	23.3	20.2	25.2	28.0	118.4
1. Total Ordinary Revenue	15.4	17.4	19.6	18.2	22.4	26.7	104.3
2. Foreign Grants and Loans	4.3	3.8	3.2	1.4	2.1	0.4	10.9(1)
3. Loan Commissioners' Repayments	0.5	0.5	0.5	0.6	0.7	0.9	3.2
B. *Expenditure*	17.6	20.0	21.8	21.1	23.9	24.3	111.1
4. Ordinary Expenditure(2)	14.3	15.1	15.1	15.4	19.3	19.5	84.4
5. Development Expenditure	3.3	4.9	6.7	5.7	4.6	4.8	26.7
C. Balance (A–B) (3) ..	+2.6	+1.7	+1.5	—0.9	+1.3	+3.7	+7.3

Source : Planning Bureau.

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(1) This includes U.K. grants, P.L. 480 loans from the Federal Republic of Germany and the Resettlement Fund of the Council of Europe, etc.

(2) Ordinary Expenditure includes grants made to Communal Chambers.

(3) Government cash surplus does not include funds obtained from Treasury Bills.

The behaviour of the private sector also contributed to the maintenance of internal and external equilibrium. In the five-year period the private sector increased its borrowing from the banking system by £18.7 million. A large part of bank credit was used to finance investment. With this additional purchasing power channelled into the economy by the banking system there was a parallel growth of liquidity of the private sector, particularly in the form of fixed deposits with banks, and no pressure was therefore exerted on either domestic or foreign resources. The total volume of money in the five-year period increased by £28.3 million ; of this increase £16.9 million was in time deposits (see Table 6).

Monetary Indicators 1961—1966
(Changes in £ mln.)

TABLE 6

Year	Volume of Money	Time Deposits	Bank Credit to Private Sector	Banks' Net Liquid Assets	Foreign Exchange Reserves
1961 ..	7.0	4.5	3.2	2.2	6.7
1962 ..	8.3	5.2	2.4	5.5	7.2
1963 ..	3.6	2.1	4.2	0.7	6.3
1964 ..	3.8	1.4	0.1	2.8	2.4
1965 ..	6.4	4.1	3.6	1.1	7.7
1966 ..	6.2	4.1	8.4	0.1	6.2
1962–66 ..	28.3	16.9	18.7	10.2	29.8
1961–66 ..	35.3	21.4	21.9	12.4	36.5

Source : Central Bank of Cyprus, Annual Report.

During 1966 the increase in bank credit exceeded considerably the growth in bank deposits. This was not so much the result of overspending by the private sector, but rather the result of the Government policy of budget surpluses.

Although the structure of the Cyprus balance of payments in 1966 (see Table 7) does not look very dissimilar to that of 1960, in that it depicts a large trade deficit financed from a surplus on the invisible account and capital inflow, yet, as indicated previously, some notable improvements have been effected which are the result of the conscious and systematic effort to restructure the economy and place the balance of payments on sounder foundations. Thus, merchandise exports now cover a larger proportion of imports. While in 1961 the ratio of exports to imports was only 47 per cent, by 1966 this ratio improved to nearly 58 per cent. Improvements were also effected in the composition of trade. In 1960 about 60 per cent of total imports were consumer goods and only 40 per cent raw materials and capital goods ; by 1966 these percentages had almost been reversed.

TABLE 7

Balance of Payments Summary, 1961–1966

(£mln.)

	1961	1962	1963	1964	1965	1966	1962–1966
Imports of Goods & Services(1)	41.5	47.9	50.3	40.8	53.6	58.7	251.3
Exports of Goods & Services(1)	30.0	33.7	35.7	31.1	44.0	51.1	195.6
Balance in Goods & Services ..	—11.5	—14.2	—14.6	— 9.7	—9.6	—7.6	—55.7
Net Factor Income from Abroad	5.2	5.4	5.2	6.1	6.7	4.9	28.3
Balance of Goods & Services & Factor Income	—6.3	—8.8	—9.4	—3.6	—2.9	—2.7	— 27.4
Transfer Payments : Total ..	7.9	7.8	6.5	4.2	5.5	4.1	28.1
of which : Public	4.9	4.2	3.0	0.2	1.9	0.4	9.7
Private	3.0	3.6	3.5	4.0	3.6	3.7	18.4
Current Account Balance ..	+1.6	—1.0	—2.9	+0.6	+2.6	+ 1.4	+0.7
Long-term Loans & Private Investment Financing ..	2.6	1.2	3.0	0.8	6.8	2.1	13.9
Errors & Omissions	2.5	7.0	6.2	1.0	—1.7	2.7	15.2
Change in Foreign Currency Holdings	6.7	7.2	6.3	2.4	7.7	6.2	29.8
Situation in Foreign Assets ..	24.0	31.2	37.5	39.9	47.6	53.8	

Sources : Central Bank of Cyprus and Planning Bureau.

Total export receipts increased from about £16 million in 1961 to about £28 million in 1966. Though mineral exports, on account of higher international prices, contributed to this increase, agricultural exports more than doubled and now constitute the largest proportion of exports.

In the invisible account foreign military expenditure (about £23 million in 1966 as against £17 million in 1961) continues to constitute the main item ; however, foreign aid, which during the period 1962–1965 amounted to about £10.5 million, was insignificant in 1966. Remittances by Cypriots living abroad, another important invisible item, averaged during the last few years about £3.5 million per year. Tourist receipts rose from £2.8 million in 1961 to £4.5 million in 1963. Despite the set-back of 1964, tourist earnings increased to £3.6 million in 1966, compared to only £1.0 million in 1964. Finally, in so far as the capital account is concerned, between 1962 and 1966 Cyprus has been consistently a net recipient of foreign capital.

The internal and external stability outlined above had its favourable effects on internal costs and prices. There is no unique indicator through which general price movements could be studied. Important external factors which have influenced prices in the past render the analysis even more complicated. A variety of indicators, however, could be considered for this purpose. The main price indices are given in Table 8.

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(1) As defined in National Accounts.

TABLE 8

Price Indices, 1962–1966
(1961=100)

Year	(1) Retail Prices	(2) Predominant Wage Rates	(3) Export Prices (incl. Minerals)	(4) Export Prices (excl. Minerals)	(5) Import Prices
1962 ..	100.1	102.2	108.7	117.2	100.0
1963 ..	102.1	107.4	100.9	111.1	97.4
1964 ..	101.8	106.6	100.9	97.4	96.7
1965 ..	102.0	109.1	111.2	107.6	101.5
1966 ..	102.5	112.4	126.6	115.2	99.7

Source : Statistics and Research Department, Ministry of Finance.

Between 1961 and 1966 the index of retail prices rose by 0.5 per cent per annum, as against 2.6 per cent of the previous five years, 1956-1961. Money wage rates increased by about 2.4 per cent annually. Finally, export prices (excluding minerals which do not affect the internal price level), after a substantial increase in 1962, showed a decrease in the two subsequent years and rose again in 1965 and 1966, while the terms of trade have been moving in our favour.

2.2 As mentioned earlier, one of the immediate objectives of the First Plan was to mobilise unemployed resources and to revitalize the economy which at the time of Independence " seemed to be running along a downhill and rather bumpy road "(¹). That was one of the main reasons for the heavy emphasis laid on the implementation of Government development projects. Table 4 in Chapter 4 B summarizes development expenditure realised by Government and Public Corporations during the Plan period. The following is a brief account of the main development projects and activities undertaken in the public sector. More information is given in Part III in the appropriate chapters.

2.3 In the agricultural sector heavy emphasis was placed on intensive cultivation and on investment which would bring about quick and high returns. (The results are reflected in a 50 per cent increase in the value of production(²) and a doubling of exports). This entailed substantial expenditure on the conservation, development and proper use of water resources with a consequent expansion of irrigated land. By the end of the five-year period twenty large water storage dams and some 100 small recharge dams had been built increasing storage capacity seven times, i.e. from 1,300 million gallons to about 10,000 million gallons. Because of the crucial role of water and the necessity of introducing control measures to prevent

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(¹) U.N. : " Cyprus—Suggestions for a Development Programme".

(²) Between the average of 1960–1961 and 1966.

over-extraction and sea intrusion, a survey was undertaken with the assistance of the United Nations Special Fund designed to assess the Island's ground water and mineral resources. Legislation was also introduced (the Water Supply (Special Measures) Law) to enable control of groundwater extraction and usage. Similarly, considerable expenditure was incurred on land improvement, plant protection, etc. The agricultural extension services, which in 1960 were both quantitatively and qualitatively inadequate and, therefore, ineffective, were expanded and their quality improved with the result that modern farming techniques and advice can now be brought to the doorstep of the farmer. An effort was also made to modify the system of agricultural subsidies with the ultimate aim of effecting through subsidies a gradual structural transformation in agriculture and a more rational utilisation of resources. Examples of this new orientation are to be found in the encouragement through subsidisation of extensive soil conservation works, irrigation projects, the use of pesticides and fertilizers, the adoption of a number of tree-planting projects, early vegetables, etc. The problem of marketing was not neglected and two Marketing Boards, for potatoes and carrots, have so far been established. The role of research in modernising agriculture and maximizing yields and income was recognized and with assistance from the U.N. Special Fund (through FAO) an Agricultural Research Institute was established, which by the end of the Plan period had cost £636,000 out of which about £400,000 had been provided from Cyprus Government funds. The initial period was one of preparation and organization, but nevertheless a number of research projects of potentially great economic significance were initiated. Although some of the projects have already borne fruit, because of the long gestation period the bulk of the research work is likely to produce tangible results gradually.

In the field of animal husbandry, development expenditure of the order of £450,000 was incurred the emphasis having been on the introduction of new and improved breeds. The poultry and pig industries in particular recorded a spectacular advance. The veterinary services were strengthened ; new veterinary stations were built in Nicosia and Paphos (including a central laboratory) and a number of contagious diseases, which in the past decimated the animal population, were eradicated.

In the field of forestry, considerable progress was also made and an area of 33,000 dónums was reforested at a cost of £154,000. A sum of about £85,500 was spent on silviculture and an area of 116,000 donums was treated. Other development activities in this sector included forest protection, forest roads, telecommunications, improvement of forest department housing, development of communal forests, national forest parks and roadside plantations. Very little progress was, however, made with the implementation of projects which would enable the increased utilization of locally produced timber.

For the development of village communities, development expenditure of the order of £2.1 million was incurred on village and farm roads, village streets, slaughter houses and other public buildings. An additional expenditure of £2 million was incurred on village domestic water supplies with the result that by the end of the Plan period practically all villages in Cyprus had a piped supply. Besides, extensive improvements were made and house-to-house distribution systems were installed so that, by 1966, about 67 per cent of the rural population had a house-to-house metered supply. The financing of several of these projects (as well as of a number of other irrigation and forest development projects) was facilitated through P.L. 480 grain assistance (see Table 9).

In order to assess the mineral resources of the Island and, if possible, tap new ore deposits, the Groundwater and Mineral Resources Survey Project referred to earlier carried out a detailed geological mapping of 659 square miles ; an airborne electro-magnetic and magnetic survey of an area of 600 square miles, which preceded geophysical exploration for minerals ; and mineral exploration in 38 areas covering 80 square miles.

In the industrial sector the declared policy was consistently pursued to create conditions conducive to the development of private initiative. This in effect has meant the judicious use of the tariff, the carrying out of necessary infrastructural projects and the creation of external economies, which raise the rates of returns to levels which may attract investors. Research was also undertaken with the object of identifying industrial opportunities. Thus, a comprehensive industrial survey was undertaken and specific feasibility studies were carried out by foreign firms or U.N. experts on the oil refinery project, the establishment of industrial estates, on forest industries, on fertilizers, on paper and pulp production, and on free zone industrial estates. An industrial estate in Nicosia has already been set up, a second is planned for Limassol and a third for Larnaca. An Industrial Bank (the Cyprus Development Corporation) has been established to provide long-term credit and technical assistance to industry. To improve the level of skills and develop management a Productivity Centre was established as a U.N. Development Programme Special Fund assisted project. Similarly, an apprenticeship training scheme has been started.

The production of electricity was expanded at a fast pace. With the completion of the Moni Power Station and the commissioning of two thermo-electrical power units installed capacity increased from 70 M.W. in 1961 to 144 M.W. by the end of 1966(¹). Besides improving town supplies, electrification of rural areas continued and during the five-year period 220 additional villages were provided with electricity, as compared with a total of 96 which were on supply in 1961.

As far as telecommunications are concerned, more than 11,000 were added to the subscribers of the Cyprus Telecommunications Authority and 266 call offices were established in the rural areas. During the same period, 62,714 miles of distribution lines were laid and telephone exchanges increased by 7,825. Substantial improvements were also made to overseas communications.

To enable the Government to plan the tourist industry on sound foundations and introduce measures designed to accelerate its development, specific studies were entrusted to foreign and local experts. Thus, a general survey was carried out by a foreign team of tourist experts and town planners under bilateral arrangements. To provide trained personnel for the industry, a Central Hotel School was established and some 110 scholarships were awarded to Cypriots to study in the Hotel Schools of Greece, Switzerland and Scotland. To facilitate improvement, extension and construction of new hotels, £600,000 were made available for long-term loans at low interest rates. Six hundred and thirty bedrooms of a total capacity of 1254 beds were added between 1962 and 1966 and as a result hotel accommodation increased by about 40 per cent. In addition a Cyprus Hilton hotel was set up with a capacity of 300 beds at a cost of about £1.4 million. Four tourist pavilions were built, a Tourist Centre was established in London and tourist publicity was stepped up. The tourist traffic was steadily expanding until 1963 when it suffered a serious set-back due to the emergency. However, by 1966 the industry had recovered.

In the field of antiquities, the excavation programme was continued, as well as work for the preservation and reconstruction of ancient monuments. Salamis, Soli and Curium Theatres were reconstructed and other monuments were preserved. Large-scale excavations were carried out by the Department of Antiquities in addition to the work done by seven foreign archaeological missions. An overall improvement of the Cyprus Museum was achieved and two new ones were established in the districts. The overall implementation of the programme entailed expenditure of the order of £300,000.

(¹) Not including installed capacity by industrial establishments (9.9 M.W. in 1961 and 15 M.W. in 1966).

The road network was substantially improved and, if municipal roads are included, expenditure of the order of £7.3 million was incurred in this sector (including about £1.8 million on maintenance). The Famagusta port was extended at a cost of £1.4 million and improvements were also effected to Kyrenia and Paphos harbours. Progress was made with the construction of new terminal buildings at the Nicosia Airport, the cost of which will finally exceed £1 million.

Broadcasting services were improved. A better coverage of the west part of the Island was achieved by the construction of the Limassol relay station. The number of programmes increased and qualitative improvements were effected. The number of subscribers increased from 97,000 in 1961 to 139,000 in 1966. The television network also was improved by the construction of relay stations at Kantara and Troodos at a cost of about £188,000. The number of subscribers increased sixfold from 3,500 in 1961 to 21,000 in 1966.

Progress was also made with the improvement of postal services, both for the urban and the rural population. Three branch post offices and one district post office were constructed and others were enlarged.

In the field of social services, the main Government development activities were :

For the provision of increased and improved medical services attention was concentrated on the quantitative and qualitative improvement of the medical and para-medical personnel and the expansion of hospital bed accommodation. The number of specialists was increased and so was the number of physicians, pharmacists, nurses, and midwives. To improve the standard of nursing, the School of Nursing of the Nicosia General Hospital was reorganized. Facilities were also afforded for post-graduate training in the medical, dental and nursing professions, as well as in laboratory technology. During the Plan period 80 fellowships were awarded for this purpose. To expand accommodation, two new wards (a Surgical and an Orthopaedic) were added to the Nicosia General Hospital, a new Psychiatric Unit and a Psychiatric Hospital were built at Athalassa and a Psychiatric Wing was added to the Nicosia General Hospital. A modern building to house the Physiotherapy Unit was also constructed in the precincts of the Nicosia General Hospital. To improve the services in rural areas antiquated dispensaries and cottage hospitals were replaced by rural health centres.

The Social Insurance Scheme was amended in 1964 to provide for (*a*) the inclusion of every working person in the Island (including employers, farmers and agricultural workers); (*b*) the consolidation of the Workers' Compensation Law with the Social Insurance Law and, thereby, the payment of industrial injury benefits to participants in the scheme; and (*c*) an increase in social insurance benefits by 50 per cent. The Trade Union Law was amended to ensure freedom of association. Industrial peace was maintained and whereas in 1961 21,267 man-days were lost on account of strikes or lock-outs, in 1966 the number of man-days lost was only 2,708. Legislative and other measures were also taken to enhance workers' safety at work.

The provision for public assistance was stepped up. (Expenditure for this purpose during 1962-66 amounted to £791,000). A new Children's Home was established in Nicosia and new premises for an already functioning Home were constructed in Famagusta. A new hostel was set up in Famagusta and the premises of the Nicosia and Paphos hostels were extended. A Home for Maladjusted Girls was also established in Nicosia to meet a pressing social need.

Improvements were effected to the prisons and the Reform School with the object of rendering them better able to fulfil their true function, namely that of reformation and rehabilitation. A new School for the Blind was also built at a cost of £72,000.

Since Greek education was taken over by the Government in 1965, the provision for expansion and improvement of school-buildings and purchase of necessary equipment has been stepped up. By the end of the Plan period about £600,000 had been spent from Development Budget allocations for this purpose. (During 1962-1964, grants given by the Government to the Greek and Turkish Communal Chambers amounted to £5.6 million).

Attention was also directed to the need for overseas training of Government personnel as well as of personnel in the private industry in those skills in which there was a particular scarcity. During the Plan period the Scholarship Selection Board carried out selection for 600 scholarships of all kinds, both undergraduate and post-graduate. If scholars otherwise selected, e.g. through the various Ministries (150), the Greek Communal Chamber (296), the State Scholarships Foundation of Greece (222), the Fulbright Programme (107), the Archbishopric, etc., are included, the number of Cypriots who benefited through scholarship awards is quite substantial.

3. Foreign Aid and Technical Assistance

The following table shows the grants and loans actually received by the Government (and Public Corporations) since Independence.

Foreign Grants and Loans to Government and Public Corporations, 1960–66

TABLE 9

	£ *million*
1. U.K. Grant (under the Treaty of Establishment)	12.00
2. U.K. grants (under the Treaty of Establishment) for the Nicosia Airport and the new Famagusta–Nicosia road	0.84
3. U.S.A. Grant under P.L. 480 (Title II). (Proceeds of Sale of Grain)	1.77
4. U.S.A. Loan under P.L. 480 (Title I)	0.39
5. Loan from the Government of the Federal Republic of Germany	0.72
6. Loan from the Resettlement Fund of the Council of Europe	0.18
7. Loan from the International Bank for Reconstruction and Development to the Electricity Authority of Cyprus	4.98
8. Foreign Contractors' Credit	0.97
Total	21.85(1)

Source : Planning Bureau.

In addition, valuable technical assistance (in the form of experts, fellowships, scholarships, equipment, etc.) was received from the United Nations and its Specialized Agencies as well as from friendly foreign Governments under bilateral technical assistance arrangements. Reference has already been made to the assistance provided through the United Nations Special Fund in the establishment of the Agricultural Research Institute, the Groundwater and Mineral Resources Survey Project and the Productivity Centre. Apart from Special Fund, technical assistance has also been provided by the United Nations and its Specialised Agencies under their regular programmes and the Expanded Programme (EPTA) (now technical assistance sector of the U.N. Development Programme). All these programmes have resulted in U.N. expenditure of over £1 million since Independence. Valuable has also been the technical assistance rendered to Cyprus under bilateral aid arrangements.

Technical assistance programmes have had a favourable impact on the course of economic development. A number of experts came to Cyprus to study specific problems, whose existence constituted a bottleneck to further progress, others carried out research and feasibility studies in respect of specific sectors, e.g. industry and tourism. Others served as advisors in various technical fields. Another group of experts organized and gave courses of instruction and training, each in his own particular field of specialization. All these experts have helped to fill existing gaps and have imparted knowledge and experience to their Cypriot counterparts. Equally valuable have been the fellowships and scholarships awarded to Cypriots under technical assistance programmes. These have enabled them to study in a number of countries in various parts of the world and in a variety of disciplines and specializations. These scholarships have enabled Cypriots in general and public officers in particular to acquire professional qualifications, technical knowledge and specialised skills necessary for the implementation of the Development Programme.

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(1) This amount does not include other minor loans (and suppliers' credits to Public Corporations) totalling about £1 million.

4. The Task Ahead

In the preceding paragraphs of this Chapter account has been given of some of the major development projects and activities undertaken during the Plan period in the public sector. As indicated at the beginning of this Chapter, one of the main short-term objectives of the First Plan was to mobilize unemployed resources, to create through Government development expenditure the necessary economic infrastructure and restore economic growth. This objective was no doubt achieved. A climate conducive to development was created and, in spite of the political anomaly which was interposed, the performance of the economy has been creditable.

However, many of the problems and bottlenecks which existed at the beginning of the First Plan are still present. Productivity in agriculture continues to be low; although legislation has been drafted, the problem of land fragmentation has not yet begun to be tackled; the problem of water scarcity, over-extraction and sea intrusion is still acute. Substantial investment and many organizational and institutional changes are needed to develop the Island's tourist potential. Increased attention should be directed towards the expansion of technical education, of technical and vocational training so as to meet the needs in the special skills required by the Island's expanding economy. The provision of increased and improved social services cannot be long delayed. Increased efforts need to be made to ensure a more balanced regional development. And, what is perhaps more important, the objective of restructuring the economy through the development of the Island's productive capacity should be vigorously pursued so as to ensure the creation and maintenance of conditions enabling self-propelling growth. Some of these objectives are longer-term and cannot be attained within the limited span of a five-year period, but the identification of the problems helps to demarcate the areas in which the emphasis should be placed in the period of the Second Plan.

PART II

Overall Objectives and Targets of Economic and Social Development

CHAPTER 3

LONG-TERM ECONOMIC AND SOCIAL OBJECTIVES

1. The Need for Perspective Planning

Ideally, a five-year plan should be part of a longer-term development plan. The ultimate objective of both is the maximization of the country's welfare function under different segments of time. Apart from the time element, the difference between long-term and short-term planning is that the former is necessarily more flexible ; the latter is more detailed and is designed to remove the various constraints which impede progress towards the attainment of the ultimate objective. It is not, of course, possible to do away with all constraints and structural weaknesses of the economy within the limited span of a five-year plan. But it is necessary that the orientation of action under such a plan should be towards achieving the long-term economic and social objectives.

The precise determination of long-term objectives presupposes extensive study and research as well as an insight into the future course of events. For various reasons, no attempt has been made to trace the evolution of major economic variables, say, fifteen or twenty years ahead. In the first place, statistical projections for long periods are not likely to be useful, being of doubtful accuracy because of structural changes taking place in the economy. In the second place, these structural changes are in certain cases themselves the desired result of adopted plans and policies. Hence, a good knowledge of the main structural weaknesses of the economy would suffice for the establishment of a number of long-term objectives towards which five-year plans should aim. A number of long-term objectives are set out in paragraph 3 of this Chapter against which the objectives of the Second Five-Year Plan, outlined in Chapter 4 and elsewhere, should be considered.

2. Salient Characteristics of Economic Growth, 1930-1960

2.1 The economic and social structure of Cyprus in the mid-1960's is remarkably different from that which existed in the pre-World War II era. Perhaps the most striking change has been the development of foreign trade. During the 1930's the economy was basically self-sufficient, with imports adding relatively little to the consumption pattern. The majority of the population derived their livelihood from dry-land farming —a livelihood which fluctuated widely depending on weather conditions. During that decade the imports of goods varied between £1.5 and £2 million, while exports fluctuated between £1 and £2 million. There was normally a small balance of trade deficit covered by net invisible receipts and capital movements. It is probable that neither exports nor imports exceeded 10 per cent of national income, although no official estimates are available prior to 1950. In 1962, the first year of the First Five-Year Plan, commodity exports were about 17 per cent of national income and imports about 36 per cent. Foreign trade has brought benefits in the form of rapid economic growth and a diversity of consumer goods which are now an accepted part of Cypriot life. At the same time foreign trade has also made Cyprus dependent upon factors over which it has little if any control.

2.2 Other details have been given in Chapter 1 of the growth which occurred between 1950 and 1957 and the economic and political turbulence during 1958-61 which surrounded the founding of the Republic. Three sources can be identified as having driven the engine of growth during the 1950's.

First, the area of agricultural land suitable for perennial irrigation increased rapidly. No precise quantitative comparisons can be made between the census years 1946 and 1960 because comparable statistical data do not exist. Nevertheless, it is certain that the increase of mechanically irrigated land far exceeded that using surface water. Irrigated land is still a small proportion of total agricultural land, but about 52 per cent of the value of agricultural crops is currently produced on it. The growth in irrigated land has provided Cyprus with the means to become an important supplier of vegetables and fruits to European markets.

Second, stimulated by the Korean War and maintained by relatively attractive prices, mineral production far exceeded its previous level. During the pre-World War II era, exports of minerals accounted for only one fifth of total exports. Subsequently, minerals brought in over 50 per cent of the visible export earnings, thus providing new employment and added incomes.

Third, the construction and operation of the United Kingdom military bases brought a remarkable increase in production, particularly in the service and construction sectors. Net receipts from this source, as reported in the balance of payments, increased over the decade from less than £2 million in 1950 to about £15 million in 1960.

An obvious characteristic of economic growth during the 1950's is that three of its principal sources comprised the major foreign exchange earners. Mineral and agricultural exports together with revenues received in conjunction with the United Kingdom military bases grew relative to other foreign exchange earnings throughout the decade and by 1960 accounted for about 85 per cent of receipts from goods and services. Thus at the same time that incomes were rising foreign exchange earnings were increasing sufficiently to provide a growing diversification of consumer goods. This has enabled a significant improvement in the standard of living of the people. Gross National Product at 1950 constant prices increased by 5.8 per cent per annum between 1950 and 1957 and, in spite of a consistent decline of it between 1957 and 1960, the rate of growth for the whole decade was about 2.9 per cent per annum. When population increases are allowed for real Gross National Product per capita increased by about 1.4 per cent per annum. Private consumption per capita also increased by about 1.3 per cent per annum during this decade.

Unfortunately, the growth which took place was not based on an expansion of the productive capacity of the Island. The principal forces of growth, outlined above, contained within themselves the seeds of retarding factors and the recession which began in 1958 can be largely attributed to them. Thus, the downturn in 1958 was mainly the result of the contraction of Military expenditure and of falling agricultural and mineral prices. The situation was aggravated in 1959 and 1960 by the coincidence of drought conditions.

3. Long-Term Objectives

The experience of the 1950's brings to light the basic weaknesses of the Cyprus economy. These weaknesses are mainly of a structural nature and to remedy them is a long-term process. The framework within which the development effort operated during the First Plan period 1962-1966 was in line with the long-term aim to effect such structural changes to the economy as to render it able to sustain continuous and rapid expansion. In spite of the substantial progress made, there is still much to be done in the way of effecting the desired structural changes and creating those conditions which will permit increased economic and social welfare. Hence, the following long-term objectives against which the Second Plan must be considered.

3.1 Sound Balance of Payments

From the above brief review of the past it will be seen that the balance of payments is of crucial importance for stable growth in more than one ways. Adequate foreign exchange is required to permit Cyprus to import new capital goods necessary for increased productive capacity. Many of Cyprus's capital goods will continue to be imported in the foreseeable future, for example machinery and equipment, which cannot be economically manufactured locally. Extra amounts of foreign exchange will also be needed to provide Cyprus with a variety of consumer goods. The small size of the internal market limits the kinds of products that can be economically produced for the home market. In sum, more foreign exchange is required to permit Cyprus to purchase those goods and services which cannot be produced or provided locally and which promote growth and improve the living standards.

Concurrently with increasing exports and producing more products, which are presently imported, the growing difference between imports and exports must be limited. Cyprus must earn more to pay for growing imports. Hitherto, the excess of the imports of goods and services over exports has been made possible by invisible receipts, private transfer payments and capital movements from abroad, by both the private and public sectors.

The ultimate objective with regard to the balance of payments is to restructure and diversify external sources of foreign exchange earnings. The export basket must be diversified and enriched. At the same time other sources of foreign exchange earnings must be sought such as tourism, increasing participation in international transportation etc., so as to relieve the economy from too heavy a dependence on unstable sources, e.g. foreign military expenditure.

As far as imports are concerned, although initially increasing quantities must be expected as the economy equips itself with modern and adequate capital goods, eventually, every effort must be made to reverse the trend so that the trade deficit may be narrowed down and, if possible, be eliminated. To reach this stage, economically viable projects aiming towards import substitution and/or export promotion should be encouraged. And this leads to another long-term objective, which is the restructuring and diversification of the productive capacity of the economy itself.

3.2 Full Utilization of the Island's Productive Resources

Agriculture still provides employment for about 42 per cent of the economically active population. Comparing value added in agriculture to total Gross Domestic Product it will be seen that its contribution is only 20 per cent. On the other hand a proportion of the agricultural population is underemployed. Both these indications speak of an uneconomic utilization of the human factor in agriculture. The long-run objective is to utilize this labour force more productively either in agriculture or elsewhere.

The provision of a job to every person able and willing to work is not enough as a long-run objective. The goal is to provide training and retraining to all workers so as to enable them to maximize their contribution to production. In this connexion, concerted action will be taken by all Government Departments in order to identify future needs in various skills. In parallel, existing training institutions will be reorganized and others will be set up so as to satisfy the needs in trained personnel.

The development of skills will proceed hand in hand with an effort to develop the productive sectors of the economy and the modernization of others so as to render them more efficient. In this context, big strides forward are envisaged for industry, including manufacturing, electricity and construction.

Along with the development of the human factor, the need arises for a more rational utilization of certain other resources e.g. capital, water and land.

Thus, in the case of capital the objective is to effect such institutional changes and to take such other measures as would enable the tapping and channelling of financial resources to the most productive uses.

An efficient and rational utilization of the scarce factors of land and water will comprise one of the fundamental objectives of long-term economic development policy. This is because at the moment and for a very long time ahead these two factors will be of vital importance as major sources of domestic production, exports, employment and raw materials for local industry.

The essence of development consists in extending factors or enhancing their productive capacity by qualitative improvement or appropriate combinations with other factors and inputs. The long-term prospects for extensive use of both land and water are limited. Land which is " usable " or " suitable " for cultivation is restricted and water supplies from natural sources have their limitations too. Irrigated land could be substantially increased if all surface and underground water sources were appropriately conserved and exploited. Consequently, the emphasis of the land and water development efforts will concentrate on intensive methods and productivity improvements : cultivation of more remunerative crops, better use of such inputs as fertilizers, pesticides and machines ; fuller utilization of labour, improvement of farmer skills, improvement in water use efficiency and irrigation practices.

3.3 Improvement of Social Services

Cyprus has already attained a level of social services—especially in education, health, housing, and social insurance—which permits most citizens to enjoy good health, to participate in the intellectual life of a twentieth century world, to be adequately housed, and to be unafraid of personal disasters arising from unemployment or illness. Nevertheless, the Government does not intend to delay much longer new social developments because it recognizes that health, education, and other social considerations affect and are interdependent with a vast complex of variables which determine both the social and economic welfare of the Island. Aside from continuing to advance on a broad front of social services, one of the principal social objectives is to provide better opportunities for those living in rural areas to enjoy and participate in the social advantages of a modern society.

More specifically, the long-term objectives in the field of social services may be summarized as follows : extension of the age limit for free education and qualitative improvement of education, the introduction of a national health service or a variant of it, improvement of social insurance schemes, improvevement of housing conditions, especiallly in the rural areas, and cultural development.

The ultimate objective as far as education is concerned is the provision of free and qualitatively better education at all levels. The Government recognizes the productive character of investing in education. However, because of the high cost involved and the organizational problems entailed, progress towards this goal will have to be gradual.

In the field of health, one of the objectives is the introduction at a later stage of a national health service or some other suitable scheme. As in the case of education, much preparatory work must precede the introduction of such schemes.

Housing conditions, especially in rural areas, will be studied. The result of the study will indicate the magnitude of the problem and will outline probable solutions. Finally, cultural development will attract more and more attention as development proceeds to higher levels.

3.4 Regional Development

It is not possible or economically justifiable to develop every region of the Island at the same pace. Regions do not possess the same advantages and resources. Nonetheless, efforts will be made to step up economic activity in low-income areas. The longer-term objective, however, is to exploit the potential of all regions and to reduce and if possible eliminate income differentials between regions. This can be more easily achieved in the long-run because, in the course of time, differences in comparative advantages between regions may be reduced and even reversed.

CHAPTER 4

OVERALL DEVELOPMENT TARGETS AND OBJECTIVES OF THE SECOND PLAN, 1967-1971

A. BASIC OBJECTIVES

1. Rate of Growth

Rapid economic growth, a satisfactory balance of payments position, relatively stable prices, and full employment are the broad general indicators of the factors which comprise economic welfare. In an important sense, however, they are more than merely descriptive variables of the country's well-being ; they are the main targets which are subject to influence by Government policies. Among these objectives, which may be partly in conflict with one another, and in line with the long-term objectives set out in Chapter 3, the best solution for maximum attainable economic welfare was selected. The annual rate of growth of Gross Domestic Product of about 7 per cent adopted for the Second Plan reflects this solution. Detailed sectoral and inter-sectoral studies carried out have confirmed the feasibility of this rate. The corresponding rate of growth of Gross National Product is 6.8 per cent (Table 1).

2. Sectoral Growth Targets

A breakdown of the aggregate Gross Domestic Product by sectors as well as the overall and sectoral rates of growth in the First and Second Plans are given in Table 1. It will be observed that besides the anticipated increase in Gross Domestic Product, a number of structural changes are envisaged. Agriculture, a vital sector of the economy, is expected to increase its share in total value added. Similarly, the industrial sector (comprising manufacturing, construction and electricity) will also enlarge its share. Both of these structural shifts are among the necessary prerequisites for future sustained growth. More details about sectoral developments are given in the appropriate chapters.

TABLE 1.

Gross Domestic Product by Sector and Gross National Product, 1961, 1966 and 1971

(*At Constant*, 1966 *Prices*—£mln.)

	1961	1966	1971	Growth 1961–1966	Growth 1966–1971	Percentage Share of Each Sector		
				Rate p.a.	Rate p.a.	1961	1966	1971
Agriculture, Forestry, Fishing and Hunting ..	19.7	27.9	42.0	7.2	8.5	18.3	20.2	21.4
Mining and Quarrying	10.0	9.6	9.6	—0.8	—	9.3	6.9	4.9
Manufacturing	13.2	16.8	27.0	4.9	10.0	12.3	12.2	13.8
Construction	5.2	7.5	12.4	7.6	10.6	4.8	5.4	6.3
Electricity, Gas and Water	1.6	2.5	3.7	9.4	8.2	1.5	1.8	1.9
Transport, Storage and Communications.. ..	12.6	16.7	23.0	5.8	6.6	11.7	12.1	11.8
Wholesale and Retail Trade	16.3	20.9	31.0	5.1	8.2	15.1	15.1	15.8
Banking, Insurance and Real Estate	2.4	5.0	7.5	15.8	8.4	2.2	3.6	3.8
Ownership of Dwellings	8.6	10.7	12.0	4.5	2.3	8.0	7.7	6.1
Public Administration and Defence	6.2	8.1	10.8	5.5	5.9	5.8	5.9	5.5
Services	11.8	12.5	17.0	1.2	6.3	11.0	9.1	8.7
Gross Domestic Product at 1966 Factor Cost ..	107.6	138.2	196.0	5.1	7.2	100.0	100.0	100.0
Plus Indirect Taxes	9.0	12.7	17.0	7.1	6.0			
Minus Subsidies	—1.3	—0.8	—1.3	—9.3	10.2			
Gross Domestic Product at 1966 Market Prices	115.3	150.1	211.7	5.4	7.0			
Plus Net Factor Income from Abroad ..	4.7	4.9	3.8	0.8	—5.0			
Gross National Product	120.0	155.0	215.5	5.3	6.8			

Source : Planning Bureau.

3. Standard of Living

One of the major consequences of the increased production of goods and services will be the improvement in the standard of living of the population. In spite of an anticipated reduction in net factor income from abroad, resulting mainly from a curtailment of British military expenditure, Gross National Product per capita will increase by about 5.3 per cent per annum, thus raising per capita income from £258(¹) in 1966 to about £335 in 1971 (at 1966 prices). The corresponding rate for the period 1961-1966 was 4.4 per cent per annum.

Not all of this increase, however, will be transformed into private consumption, which is one of the best indicators of the standard of living. If allowance is made for capital formation, Government consumption etc., aggregate private consumption will increase by about 6 per cent annually as compared to 4.9 per cent during 1961-1966. The corresponding annual rates of growth of per capita private consumption are 4.5 and 4.1 per cent.

Apart from increased per capita private consumption, the Plan envisages a substantial increase in Government development expenditure on social services—health, welfare, education, etc. ; and these will further contribute to raising the standard of living of all classes of the population and especially those in the lower income brackets. Details of this expenditure and of policy measures to be taken will be given in subsequent chapters.

To ensure that all the population have a fair share in generated income, the Plan aims both at full employment and a more equitable distribution of national income.

4. Employment

In 1961 the number of unemployed constituted about 3 per cent of the total economically active population. Ever since, unemployment has been declining steadily both in absolute terms and as a percentage of the active population. In 1966 the percentage had dropped to 1.4(²). At the same time the total number of emigrants has been substantially reduced from the 1961 and pre-1961 levels. The unemployment figures given above do not include new workers, who, for one reason or another, cannot secure a job immediately after finishing a secondary school. Measures will be taken so that new workers may be able to find a useful job as quickly as possible. More about this will be said in Section C below.

(¹) Based on revised population estimates.

(²) This percentage does not include unemployed among Turkish Cypriots who may have not registered with Government Employment Exchanges.

The objective of the Plan with regard to full employment is not merely to provide gainful employment to every individual capable and willing to work. The ultimate target is to ensure the provision of the most productive employment, i.e. to raise workers skills and provide opportunities which will enable labour to maximize their contribution to production. Parasitic employment or underemployment is a waste of manpower resources and efforts will be made to reduce or eliminate it.

5. Income Distribution

Maximization of the growth potential of the economy is not a goal in itself. It is, however, the necessary condition for improving the standard of living of the population and for laying the foundations for future development. Thus, part of the augmented national product will be directed towards capital formation and other investment and the balance will be consumed.

It is one of the objectives of the Plan to ensure an equitable distribution of income. Some of the ways in which this will be achieved are : wage and salary increases will be related to the increase in overall productivity ; full employment will be both an objective and a means for attaining the Plan targets ; the provision for social services (health, welfare, education, etc.) will be stepped up ; the rural population will be assisted to attain better living standards.

In this connection reference is invited to Section D.

6. Monetary Stability

Relative external and internal monetary stability is essential for achieving the targets of the Plan. A sound balance of payments position constitutes one of the main sources of confidence in the economy, which is a necessary prerequisite for a successful implementation of economic development policy. It enables continuity in the development effort without undue pressures on the external position and recurrent bottlenecks. Also a strong balance of payments position, permitting a liberal import policy, provides a safety valve through which temporary inflationary pressures may be removed from the economy through a rise in imports. There will thus be less need to curb internal excess demand with all its unfavourable repercussions on growth.

Related to the soundness of the balance of payments is the level of foreign exchange reserves which the country should strive to maintain. These reserves should be sufficient to finance temporary deficits in the transactions with the rest of the world.

Internally, stability will be maintained if adequate financing of the Plan is secured from real resources, and if money income increases are not permitted to outstrip the sustainable growth of output. Under such conditions, inflationary tendencies will not arise and there will, thus, be no need to relax the development effort in order to combat inflation. At the same time, price stability will create the necessary conditions for a more equitable distribution of income. Finally, price stability is an important condition for maintaining the competitiveness of exports and enhancing the comparative advantage of the Island as a tourist centre.

Thus, as in the case of full employment, price stability is both a target and a means for the realization of the basic Plan objectives.

7. Balance of Payments

For the reasons explained in paragraph 6 above, a sound balance of payments position is a crucial factor in the development process of a country. The term " sound " should be taken to imply not only equilibrium in foreign exchange payments and receipts but, what is more important, the creation of conditions which would ensure a steady inflow of adequate foreign exchange earnings. And this will be achieved through a diversification and restructuring of exports, the expansion of existing and the tapping of new markets as well as through import substitution.

In spite of the accelerated development activity anticipated during the Plan period, the overall balance of payments is expected to be in surplus for most of the period as it was during the period of the First Plan. At the same time further structural improvements are to be effected. While in 1961 the ratio of merchandise exports to imports was 47.3 per cent and in 1966 57.5 per cent, by 1971 this ratio is expected to rise to about 65 per cent.

Moreover, the composition of both exports and imports will improve (Table 2).

Composition of Merchandise Exports and Imports (f.o.b.), 1961, 1966 and 1971

(Per cent)

TABLE 2

(A) IMPORTS				*(B) EXPORTS*			
	1961	1966	1971		1961	1966	1971
Total ..	100	100	100	Total	100	100	100
1. Capital goods	14.0	18.1	24.5	1. Minerals ..	52.8	44.2	27.6
2. Raw Materials (excl. fuel)	31.2	35.2	33.2	2. Agricultural Exports ..	44.7	52.2	66.0
3. Consumer & other goods (incl. fuel) ..	54.8	46.7	42.3	3. Other	2.5	3.6	6.4

Source : Planning Bureau.

Thus, as will be seen from the above table, on the imports side the share of capital goods (mostly machinery required for investment purposes) will increase at the expense of consumer and other goods. A growing share of the demand for consumer goods is expected to be met from local production.

On the exports side, the share of minerals will be reduced further whereas the share of agricultural and other (mainly manufactured) goods will be substantially increased.

The structural shifts in the balance of payments are not confined to the above changes. The dependence of the foreign sector on foreign military expenditure and other external factors will be reduced further. In this connection reference is invited to Section F where the balance of payments is further analysed and in Chapter 12, which deals with foreign trade.

B. INVESTMENT REQUIREMENTS

1. Overall Investment—Sectoral Distribution

In order to sustain the higher rate of growth in the Second Five-Year Plan it has been estimated that a total of £186 million will have to be invested by the public and the private sectors together. In addition another £10 million will be needed for increasing stocks. In estimating these investment requirements past aggregate and sectoral relations of incremental fixed capital and output were utilized, supplemented by ad hoc sectoral investment surveys and studies, and allowing for existing unutilized capacity in some industries.

The distribution of investment by sector during the First and Second Plan is given in Table 3.

TABLE 3 **Fixed Investment by Sector, 1962–1966 and 1967–1971**

(*At Constant*, 1966 *Prices*—£mln.)

	1962–1966	1967–1971	Percentage Shares in Total		Change in 1967–71 (1962–66 = 100)
			1962–1966	1967–1971	
1. Agriculture, etc.	14.4	24.0	12.4	12.9	166.7
2. Mining and Quarrying	4.3	5.0	3.7	2.7	116.3
3. Manufacturing	12.4	27.0	10.7	14.5	217.7
4. Construction	4.7	10.0	4.1	5.4	212.8
5. Electricity, etc.	8.2	6.0	7.1	3.2	73.2
6. Transport, etc.	22.4	40.0	19.3	21.5	178.6
7. Wholesale & R.T.	4.7	7.0	4.1	3.8	148.9
8. Dwellings	27.6	42.0	23.8	22.5	152.2
9. Public Administration & D. ..	0.7	2.0	0.6	1.1	285.7
10. Other Services	16.4	23.0	14.2	12.4	140.2
Total	115.8	186.0	100.0	100.0	160.6

Source : Planning Bureau.

In almost all sectors substantial increases in fixed investment are envisaged. Only in electricity generation and distribution is the planned capital formation somewhat lower than the one realized in the First Plan and this because the considerable infrastructural works, carried out during the previous five years, have created the necessary capacity for this sector to expand its production in the coming years with less investment. The emphasis given to certain sectors outlined in Section A is reflected in their increased total fixed capital formation.

2. Development Expenditure by the Public Sector

The public sector is expected to invest about £50.0 million on fixed capital formation and to incur another £16.6 million as other development expenditure, i. e. altogether about £66.6 million. This amount includes fixed investment by Public Corporations of the order of £9.6 million. The public share in total fixed investment is thus estimated at 26.9 per cent as against 22.1 per cent during the First Five-Year Plan. Analytically, development expenditure by the public sector for the years 1967-1971 as compared to the period 1962-1966 is given in Table 4. As pointed out earlier (Chapter 2), the level of public investment and public development expenditure has a compensatory role to play. It should not be regarded as a rigid commitment and will be reviewed from time to time in the light of the progress of the economy and the response and performance of the private sector.

Development expenditure is a wider term than fixed capital formation. In addition to the latter, it includes such items as extension and technical advice to the private sector, pre-investment studies and research, credit etc.

The substantial increase of public development expenditure planned in all sectors will impose a heavy strain on the Government machinery. Experience has shown that one of the main bottlenecks in the implementation of the public investment programme has been the lack of an adequate number of properly trained staff as well as weaknesses in the organizational structure. To remove these bottlenecks steps will be taken to strengthen particular departments and to effect necessary organizational changes so as to increase their efficiency and to expand their planning and executive capacity. At the same time it is proposed to contract out a number of major projects.

A detailed analysis of planned public development expenditure will be given in the chapters dealing with individual sectors. Here an outline will be given of the broad sectoral allocations. As will be seen from Table 4, overall development expenditure is envisaged to increase by about 73 per cent over the realized expenditure of the 1962-1966 period. This increase is the result of increased allocations in all sectors and sub-sectors except electricity.

Development Expenditure by the Public Sector, 1962–1966 and 1967–1971

(£ mln.)

TABLE 4

Sector or Department	1962–1966	1967–1971
1. Agriculture and Water	12.33	19.20
1.1 Agricultural Development	3.05	5.05
1.2 Animal Husbandry	0.40	1.16
1.3 Agricultural Research Institute	0.39	0.75
1.4 Water Use Improvement	0.18	1.90
1.5 Veterinary Services	0.14	0.44
1.6 Forest Development	0.66	0.85
1.7 Fisheries Development	0.07	0.40
1.8 Water Development	7.44	8.65
2. Rural Development	2.11	1.84(2)
3. Mining (Geological Survey)	0.14	0.50
4. Manufacturing	1.18	2.50
5. Commerce	0.20	0.80
6. Tourism	1.62	5.50
6.1 Tourism	1.32	5.15
6.2 Antiquities	0.30	0.35
7. Transport and Communications	6.13	15.95
7.1 Roads and Highways	3.50	6.20
7.2 Ports	1.66	7.60
7.3 Airports	0.92	1.80
7.4 Postal Services	0.05	0.15
7.5 Other (incl. Development of Inland Transport Services)	—	0.20
8. Education and Cultural Development(1)	0.60	3.00
9. Other Training Institutions and Programmes	0.15	1.05
9.1 Cyprus Productivity Centre (incl. Industrial Training Programme)	0.05	0.25
9.2 Hotel Institute (incl. Other Training in Hotel and Catering Professions)	0.02	0.43
9.3 School of Public Administration and Training Abroad	0.07	0.15
9.4 Higher Technical Institute	—	0.20
9.5 Other	0.01	0.02
10. Other Social Services	0.63	1.91
10.1 Health	0.35	1.50
10.2 Welfare Services	0.05	0.08
10.3 Labour & Social Insurance and Other Services	0.23	0.33
11. Town Planning and Municipal Projects	0.60	3.00
11.1 Town Planning	0.45	1.00
11.2 Municipal Projects	0.15	2.00

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(1) Education and Cultural Services under the Communal Chambers are not covered.

(2) Provision for certain projects has been made under other sectors.

TABLE 4 (continued).

Sector or Department	1962–1966	1967–1971
12. Public Buildings	0.16	0.80
12.1 Construction of New and Improvements to Existing Buildings	0.16	0.80
13. Other Services	0.85	0.95
13.1 Machinery and Equipment, Preliminary Planning, etc.	0.85	0.95
TOTAL GOVERNMENT DEVELOPMENT EXPENDITURE ..	26.70	57.00
14. Public Corporations	11.89	9.60
14.1 Telecommunications, Electrification and Broadcasting	11.89	9.60
TOTAL PUBLIC DEVELOPMENT EXPENDITURE	38.59	66.60

Notes : (A) In addition to the above development expenditure in the public sector additional expenditure is expected to be incurred during the Second Five-Year Plan period from U.N. Sources in connection with Special Fund and World Food Programme Projects. Such projects already in operation, approved or submitted for approval are as follows [1] :

SPECIAL FUND AND W.F.P. PROJECTS (U.N. ALLOCATIONS)

	£'000
(1) Surveys, Demonstration and Planning of Water Resources Utilization	380
(2) Groundwater and Mineral Resources Survey Project ..	140
(3) Productivity Centre	200
(4) Higher Technical Institute	300
(5) Hotel Institute	300
(6) World Food Programme—Mixed Farming Project ..	390
(7) World Food Programme—Soil Conservation and Tree Planting Project	920
(8) World Food Programme—School and Hospital Feeding Programme Project	880
(9) Near East Animal Health Institute (not yet approved by Special Fund)	150
(10) Industrial Training Programme (not yet approved by Special Fund)..	400
(11) Animal Production Improvement Project (not yet approved by Special Fund)	450
Total	£4,510

(B) Over and above these expenditures, it is expected that as in the past, technical assistance will continue to be provided to Cyprus (in the form of experts, scholarships, fellowships, etc.) from bilateral and multilateral sources of foreign aid.

During the First Five-Year Plan about 32 per cent of all realized public development expenditure was absorbed by Agriculture and another 31 per cent by Public Utilities. The balance was divided between the other sectors with Transport and Communications having a share of about 16 per cent and other sectors smaller shares. The distribution of development expenditure in the Second Plan has been made in such a way as to enable the fulfilment of the targets of the Plan and at the same time to promote the longer-term objective of diversifying and restructuring the economy. Thus Agriculture, Industry and Tourism, which are planned to become the main pillars of the economy, will maintain or increase their shares. Transport and Communications, which provide the basic infra-structure for the development of the economy, will also increase its share from 16 per cent to 24 per cent. The provision for social services will also be substantially stepped up.

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[1] New projects may be formulated during the Plan period.

3. Fixed Investment by the Public Sector

The sectoral distribution of planned public fixed investment is given in Table 5 together with the realized investment during the First Five-Year Plan. The allocation of investment, as well as of the development expenditure, was made after a careful scrutiny and evaluation of all projects and proposals submitted by Ministries and having regard to the overall needs of the Plan.

Fixed Investment by the Public Sector, 1962–1966 and 1967–1971

TABLE 5 (1962–1966 *at Current Prices, and* 1967–1971 *at Constant,* 1966 *Prices–£mln.*)

Sector	1962–66	1967–71
1. Agriculture & Water Development	5.5	8.8
1.1 Agriculture (incl. Research and the Water Use Project)	0.3	0.5
1.2 Animal Husbandry (incl. Veterinary Services) ..	0.1	0.3
1.3 Water Development	4.8	7.6
1.4 Other	0.3	0.4
2. Mining, Manufacturing and Commerce	0.2	2.3
3. Public Corporations	10.4	9.6
3.1 Electricity Authority of Cyprus	8.3	6.0
3.2 Cyprus Telecommunications Authority	1.9	2.8
3.3 Cyprus Broadcasting Corporation	0.2	0.8
4. Transport and Communications	5.8	15.4
5. Tourism and Antiquities	0.7	3.2
6. Social Services	1.0	4.8
7. Rural Development	1.5	1.7
8. Town Planning and Municipal Projects	0.4	2.9
9. Public Buildings	0.2	0.8
10. Other Fixed Investment	0.2	0.5
Total	25.9	50.0

Source : Planning Bureau.

4. Fixed Investment by the Private Sector

Table 6 illustrates the magnitude of the investment effort required in the private sector and the crucial role which private investment activity has to play in the attainment of the Plan targets. Overall private investment is expected to increase by about 49 per cent as compared to the First Plan period.

Fixed Investment by the Private Sector, 1962–1966 and 1967–71
(1962–1966 *at Current Prices, and* 1967–1971 *at Constant,* 1966 *Prices*—£mln.)
TABLE 6

	1962–1966		1967–1971	
	Total Fixed Investment	Private Fixed Investment	Total Fixed Investment	Private Fixed Investment
1. Agriculture	14.9	9.6	24.0	15.7
2. Mining and Quarrying ..	4.8	4.7	5.0	5.0
3. Manufacturing	13.9	13.8	27.0	24.9
4. Construction	5.4	5.2	10.0	9.5
5. Electricity	8.3	—	6.0	—
6. Transport and Communications	22.6	13.7	40.0	18.7
7. Wholesale & Retail Trade	4.6	4.6	7.0	6.8
8. Dwellings	25.8	25.8	42.0	41.7
9. Public Administration & Defence	0.7	—	2.0	—
10. Other Services	16.0	13.7	23.0	13.7
Total	117.0	91.1	186.0	136.0

Source : Planning Bureau.

To estimate private fixed investment requirements, public investment was subtracted from the aggregate investment needs in each sector. In some cases, e.g. manufacturing, direct inquiries were carried out in order to ascertain the intentions of private entrepreneurs as far as investment is concerned for the next five years. In other cases, e.g. investment in transport, the findings through the above deductive method were cross-checked by estimating the transport equipment required to achieve the value added target of the Plan.

5. Investment Policy

5.1 General Investment Policy

Information regarding measures which will encourage private entrepreneurs to realize the investment targets of the Plan is given in the appropriate chapters. In general, it may be said that the Government will provide the necessary incentives and facilities so that private initiative may be stimulated to take up investment opportunities. These incentives and facilities may be summarized as follows :

(*a*) Technical assistance, advice and information.

(*b*) Identification of specific investment opportunities. In this connection, Government will encourage private consultancy for proper techno-economic feasibility studies. Government Departments themselves may carry out such studies or, in the case of major projects, Government may engage consultants for this purpose. The Cyprus Development Corporation Ltd. will also play an increasingly important role in this field.

(*c*) Further infrastructural projects and facilities (highways, ports, industrial estates etc.) which will provide necessary external economies.

(*d*) Credit facilities and subsidies when necessary. Government will also endeavour to ensure that banking and other institutions (e.g. commercial banks, cooperatives, the Cyprus Development Corporation) meet the needs in short-term and long-term finance.

(*e*) Tax incentives (mainly in the form of " investment grants " and lower tax rates on profits) designed to encourage investment and discourage speculative purchase of land.

(*f*) Finally, the Plan is so designed and Government policy will be such as to enable the maintenance of conditions of monetary stability. This, coupled with the existence of normal conditions, will be a significant factor in achieving the investment targets of the Plan.

5.2 Foreign Private Investment

The Government will continue to encourage the inflow of foreign capital and know-how for the purpose of promoting projects and meeting needs which cannot be met from local sources. It is difficult for an under-developed country to accelerate its economic development relying solely on its own resources. The inflow of foreign capital cannot of course be channelled through Governments alone. There are limits to which the Governments of the various countries can provide loan funds. Furthermore, as a general rule, such state loans and grants are primarily intended for investment in infrastructural works and public utility undertakings and cannot take the place of investments made by private capital. For this reason, there is a need for additional capital and this can only emanate from private sources. This capital will be invested in undertakings in which the size of the capital, the know-how and the entrepreneurial ability constitute the most important factors of success. In such cases the contribution of foreign private investment consists not only in the supply of funds, but in a combination of capital, know-how, organizing and administrative experience, from which the Island has much to benefit.

Cyprus is in the Sterling Area; and there are at present no exchange control restrictions either on capital investment in Cyprus or on transfers of capital from Cyprus by residents of the Sterling Area. Investment of capital by residents of countries outside the Sterling Area requires permission. However, when such permission has been given the transfer of profits, dividends and interest is allowed after provision for tax. The repatriation of capital is also given equally favourable treatment.

Cyprus has also ratified the Convention on the Settlement of Investment Disputes formulated by the International Bank for Reconstruction and Development.

During the Plan period, it is proposed :

(*a*) to encourage cooperation between local and foreign firms ; (*b*) to extend available incentives and concessions to foreign firms on the basis of non-discrimination ; (*c*) to conclude double taxation agreements with more countries ; and (*d*) to undertake a promotional compaign in order to project the locational and other advantages of Cyprus.

C. POPULATION, LABOUR FORCE AND LABOUR REQUIREMENTS.

1. General

To avoid bottlenecks in the implementation of the development Plan it is necessary that the required labour force and, especially, the necessary skills must be forthcoming. The anticipated growth of the population and in particular of the economically active population was taken into account in deciding on the overall rate of growth of Gross Domestic Product. As far as the skills are concerned, many of the necessary training institutions are already in existence and further measures are envisaged in the Plan so that training and retraining for scarce skills may be effected quickly. In the meantime, the educational system, properly reoriented, will be able to provide an increasing number of technically trained graduates towards the end of the Plan period. With regard to the needs for university qualified persons, it is expected that the large number of Cypriots studying abroad (through scolarships or otherwise) will start coming back on completion of their studies. Efforts will also be made to attract Cypriot scientists now working in other countries.

2. Population and Economically Active Population

The Cyprus population increased from 576,400 in 1961 to 599,800 in 1966, i.e. at an annual rate of growth of 0.8 per cent(¹).

(¹) Population figures differ slightly from the published figures (Economic Report, Department of Statistics and Research). Persons being temporarily in the Island are excluded here. Also, persons having left the Island not permanently are covered.

It has been estimated that the population will be increasing at a rate of about 1.4 per cent during the Second Plan period and that it will reach the figure of 642,600 by 1971. The higher rate of growth envisaged is due to the reduction of net emigration. The economically active population in 1961 was 236,500 and in 1966 about 252,600 or 41.0 and 42.1 per cent of total population in 1961 and 1966 respectively. In other words, 3,220 were added to the labour force every year, or at a rate of about 1.3 per cent. The economically active population is anticipated to rise to 274,000 by 1971, i.e. to 42.6 per cent of total population. This represents an annual rate of increase of 1.6 per cent or an addition of 4,280 new workers each year.

3. Labour Requirements

Against the above manpower supply the expected requirements must be set. Table 7 shows the number of persons gainfully employed in various activities in 1961 and 1966 and the projected needs for 1971. The strategy of the Plan as far as employment is concerned is to provide employment opportunities to all people willing to work and to reduce to the minimum inevitable unemployment resulting from structural or frictional reasons. Unfortunately, the problem of new workers (mainly gymnasium graduates who fail to find suitable employment) will not be entirely solved, but increased efforts will be made to minimize it by offering to a good number of them accelerated training in various institutions.

In the period of the First Five-Year Plan the reported number of unemployed was reduced from 7,000 in 1961 to 3,500 in 1966, i.e. to about 1.4 per cent of the economically active population. This percentage does not include unemployed among Turkish Cypriots who may not have registered with Government Employment Exchanges. The Second Five-Year Plan may be regarded as fundamentally a programme for creating employment opportunities at a quicker pace than the natural increase of the labour force so that more workers will be accommodated within the productive process of the economy. It is anticipated that the level of economic activity will be such as to enable the gradual absorption of a proportion of the National Guard as well as of those Turkish Cypriots who may be currently unemployed.

4. Structure of Employment—Labour Mobilization

The structure of gainful employment in Cyprus has shown signs of a relative rigidity in the last five years. Between 1961 and 1966, in spite of a sizeable output expansion, gainful employment in such vital sectors as agriculture, industry, construction and transport has changed little as opposed to a substantial increase in employment in trade. The planned fast expansion of the Cyprus economy during 1967-71, especially in the highest

TABLE 7

Labour Requirements and Supply, 1961, 1966 and 1971 (1)

	000's			Annual Rates		Percentage Shares		
	1961	1966	1971	1961–1966	1966–1971	1961	1966	1971
1. Agriculture, Forestry, Fishing and Hunting	95.1	96.8	97.0	0.4	0.1	43.6	42.4	38.1
2. Mining and Quarrying	5.2	5.1	5.0	—0.4	—0.4	2.4	2.2	2.0
3. Manufacturing	30.6	31.2	39.0	0.4	4.6	14.0	13.7	15.3
4. Construction	20.2	21.8	27.0	1.5	4.4	9.3	9.5	10.6
5. Electricity, Gas and Water	1.2	1.8	2.0	8.4	2.2	0.5	0.8	0.8
6. Transport, Storage and Communications	9.4	10.5	12.5	2.2	3.5	4.3	4.6	4.9
7. Wholesale, and Retail Trade	15.8	20.9	25.0	5.8	3.7	7.2	9.1	9.8
8. Banking, Insurance and Real Estate	1.0	1.2	1.5	3.7	4.6	0.5	0.5	0.6
9. Government and Communal Institutions	20.2	19.5	21.0	—0.7	1.5	9.3	8.5	8.3
10. Services	19.4	19.8	24.5	0.4	4.4	8.9	8.7	9.6
Gainfully employed	218.1	228.6	254.5	0.9	2.2	100.0	100.0	100.0
Other (including Military Authorities, Unemployed, New Workers & National Guard)	18.4	24.0	19.5	—	—	—		
Economically active Population	236.5	252.6	274.0	1.3	1.6			

Source : Planning Bureau.

(1) From the point of view of sectoral coverage this table is not strictly comparable to Table 1 of this Chapter.

priority sectors of Agriculture, Manufacturing, Construction and Tourism, will call for an elastic adaptation of supply to requirements in both qualitative and quantitative terms. However, in the case of Agriculture no appreciable increase in employment is anticipated. The low productivity in this sector (less than half of the average for all sectors in 1966) and other indications suggest that a significant portion of agricultural workers are underemployed. The creation of employment opportunities in nearby urban and major rural centres will prevent mass migration of agricultural workers to urban areas and at the same time will ensure the availability of the required labour to satisfy seasonal demand peaks in agriculture.

As far as other key sectors are concerned, i.e. Manufacturing, Construction, Transport, significant structural changes will be effected and the same applies in the case of Services (because of the impact of tourism and increased emphasis on social services) and Trade (because of increased internal and external business turnover). This inter-sectoral mobility of labour, essential for achieving high rates of productivity and for restructuring the economy, entails heavy tasks of training and retraining in various skills.

5. Projection of Skill Requirements and Supply

The difficulty of projecting demand and supply of specific skills is aggravated by the lack of basic information on existing skills. Because businessmen in Cyprus do not, as a rule, plan five years ahead, it would have been impossible to conduct a survey of this sort with much possibility of success. Hence in making the projection reliance was placed on aggregate indications, on inquiries about short-term requirements and common sense.

A good start for improving manpower statistics was the initiation of the Annual Island-Wide Manpower Survey in 1966. Unfortunately, this survey covers only large establishments, i.e. establishments employing ten or more persons. Among other things, it provides information about total employment classified by occupational categories, labour requirements for the following twelve months and training requirements within industry of existing staff. On 31st March, 1966, larger firms (excluding Cypriot employment by Military Authorities) and Government Services (administration) employed 53,990, i.e. about 24 per cent of the total gainfully employed population in that year. When the non-agricultural sectors only are considered, (agriculture occupies a very small share in large establishments employment) the size of the sample rises to about 40 per cent of non-farm actual employment.

A tentative projection of additional labour requirements by occupational category for the period 1967-1971 is given in Table 8 (large establishments only). Two assumptions underlie the results obtained. First, it is assumed that the existing occupational structure in these firms will be maintained during the Plan period. Second, that employment in large firms will increase at the same rate as overall sectoral employment except in those cases in which other recent trends (as a rule higher than the overall trend) were available and were used instead.

TABLE 8

Projection of Additional Labour Requirements for the Period 1967–1971 by Occupational Categories (Large Establishments only)

Occupational Category	Labour Requirements (Number)	Per cent
1. Administrative and Managerial Workers ..	532	4.3
2. Clerical Workers	1,392	11.1
3. Sales Workers	475	3.8
4. Service Workers	587	4.7
5. Engineers, Technologists, etc.	42	0.3
6. Other Higher Grades	191	1.5
7. Technicians and Draughtsmen	118	0.9
8. Other Intermediate Grades	519	4.2
9. Foremen and Leading Bands	349	2.8
10. Skilled and Semi-skilled Workers	4,980	39.8
11. Apprentices and Learners	714	5.7
12. Unskilled Workers	2,617	20.9
Total	12,516	100.0

Source : Planning Bureau.

Both assumptions are not altogether unrealistic. The Cyprus economy has not yet reached such a level of sophistication as to necessitate radical changes in skills. At the same time in allowing in some cases for larger establishments to increase their employment faster than the overall sectoral increase, some flexibility is permitted for these establishments to restructure their occupational skills. Finally, available information suggests that, though gradually, large firms are increasing their share in overall employment at the expense of small firms.

If these projections of labour requirements by larger establishments are correct, the small establishments will absorb the remaining additional labour force needed (see Table 7), i.e about 13,200. Assuming that the structure of skills in small firms will be the same as in the case of large firms, to obtain a comprehensive picture of total skills which will be required by the non-farm sectors of the economy the figures in Table 8 must therefore be roughly doubled.

According to Table 8, a total of about 12,500 new workers will be needed by non-agricultural large establishments and the public sector (mainly administration). A total of about 5,000 out of these are expected to be skilled and semi-skilled workers, and another 2,600 unskilled workers. The needs in technical and professional workers of all grades, i.e. engineers, technologists, foremen and leading hands will be about 1,200. Finally, the needs in administrative and managerial workers will be about 530 and in clerical and sales workers about 1,900.

It is also difficult to make any reliable projections of the supply of various skills. The estimated numbers of graduates from technical and vocational schools for the years 1967-1971 are given in Table 9. Comparing the above estimated requirements as well as the needs expressed by large establishments themselves for the next twelve months with the number of graduates from technical and vocational schools it is found that in general the latter will not suffice to satisfy the former.

These rough indications will be supplemented by further detailed study and the findings will be used for the purpose of re-organizing and expanding technical and vocational education. However, even after the expansion of technical education, training in certain skills will have to be catered for by other training institutions and programmes. The reason for this is that in the case of some specializations the numbers required are small and it is not possible to establish a special course at the technical schools. In parallel other training institutions and programmes have been established which will complement the output of the educational system by extending upgrading, training and retraining courses to existing and new workers. These programmes and institutions are explained below.

TABLE 9 **Estimated Graduates from Technical and Vocational Training Schools, 1967–1971**

ISCO Code No.	Title of Course	Number
	TECHNICAL AND RELATED WORKERS :	
0–41	General Nursing	32
0–42	Midwives	20
0–49	Assistant Nurse Course	124
0–53	Community Health Visitors	25
0–x_1	Draughtsmen	150
0–x_9	Engineering Technicians, Mechanical	121
0–x_9	Engineering Technicians, Electrical	215
0–x_9	Motor Vehicle Technicians	122
0–x_9	Building Technicians	135
0–x_9	Laboratory Assistants	33
	Sub-total	977
	CRAFTSMEN :	
7–11	Dressmakers	74
7–11	Tailors	45
7–50	Fitter-mechanics	163
7–50	Fitters and Turners	152
7–53	Auto-mechanics	492
7–55	Plumbers	75
7–56	Welders	155
7–61	Electricians	598
7–72	Furniture-makers	169
	Sub-total	1,923
	SERVICE AND RECREATION WORKERS :	
9–12	Cooks	71
9–12	Maids	100
9–21	Waiters	73
—	Hotel and Catering	130
	Sub-total	374
	GRAND TOTAL	3,274

Source : Ministry of Labour and Social Insurance, Annual Report, 1966.

6. Raising Skills—Training Institutions

(*a*) *The Cyprus Productivity Centre*. This Centre was established in 1963 as a joint U.N. Special Fund—Cyprus Government venture to assist in the training of management and supervisory personnel and in upgrading skills. It is expected that the Centre will provide extended or new services during the period 1967-1971 as follows :

(i) Courses in business organization within the programme of Management Development ;

(ii) vocational instruction in the metal trades (welding) and in the automotive trades (diesel engines) within the Vocational Training Programme ; and

(iii) extension of the Centre's training programmes in industrial engineering and economics.

These extended activities of the Centre are considered necessary for further training and instruction in management development. They are also designed to offer better specialization in the fields of metal trades (welding) and automotive trades (diesel engines) which are already included in the vocational training activities of the existing project. In addition, vacational up-grading for new industries such as furniture and building will be provided.

(*b*) *Industrial Training Programme*. It is planned to establish with U.N. Special Fund assistance an industrial training service to coordinate existing and future training activities under the jurisdiction of the Ministry of Labour. These training activities relate to the Apprenticeship Training Scheme, the Higher Technical Institute, the Hotel Training Institute, the Training Centre for the Rehabilitation of the Disabled, retraining of redundant workers, and the training of selected junior technicians. An account of some of these training activities is given below :

(i) *Apprenticeship Training Scheme*. This scheme has been in operation since 1963 and has been applied to certain trades and skills, the overriding factors in the selection of trades having been the availability of training resources in the form of equipment and instructors at technical schools and the actual needs of industry. Under this scheme about 300 apprentices were receiving training in 1966. During the Plan period the scheme will be placed on a firmer basis.

(ii) *Higher Technical Institute*. The need for higher technicians to fill technical posts in industry and satisfy the requirements in teaching staff of technical schools will be met by the establishment of a Higher Technical Institute (with assistance from the U.N. Special Fund). The Institute which is expected to start operating in 1968, will offer a three-year post-secondary school course in civil, electrical and mechanical engineering, and technical training. During the summer vacations training in industry will be organized for the students. During the final year of the course students will opt to specialise either in Industrial and Business Management or Technical Education and Teaching. Specialised courses in certain other fields where there is a great demand (food processing etc.) may also be organized at a later stage. The level of instruction will be similar to that of the Higher National Diploma of the City and Guilds of the London Institute adapted to suit local needs.

The following table illustrates the enrolment and output of the Higher Technical Institute during the period covered by the Plan.

	1968–69	1969–70	1970–71	1971–72
Enrolment	82	198	268	308
Main Courses	82	158	228	228
Specialized Courses	—	—	—	20
Refresher Courses	—	40	40	60
Output	—	—	70	70

(iii) *Hotel Institute.* The anticipated development of the tourist industry necessitates the training of hotel and catering personnel in sufficient numbers. The two existing Hotel Schools offer only basic training. To meet the needs of the Island in trained hotel and catering personnel a joint U.N.-Government project is planned for implementation in 1968/1969. Courses will be available in cooking, waiting, reception and housekeeping for supervisors, hotel managers, and the prospective teachers for the Hotel Schools. Upgrading and accelerated refresher courses will also be organized. Although the Institute will place emphasis on the managerial level, initially training for middle level personnel will be available in order to raise the overall standards. In addition to its training activities, the Institute will provide advisory and consultancy services and information to hotels and tourist agencies. Lastly the Institute will undertake documentation and research activities in the field of hotel keeping and tourism development especially with a view to developing local food utilization.

(iv) *Retraining of Redundant Workers etc.* These training facilities are considered to be of particular importance to both workers and the economy. Rapid changes in certain industries or external factors, e.g. closing down of Military Bases, will render a number of people unemployed. Through a system of retraining, workers may be equipped with new skills and be diverted to meet existing needs in other sectors of the economy. The dynamism of an expanding economy could be preserved through facilities for re-employment and mobilization of its labour force.

(*c*) *School of Public Administration.* In an effort to raise the standard of the civil service, in addition to the contemplated restructuring of the service the Government is currently studying the establishment of a School of Public Administration.

(*d*) *Scholarship Programme and Training Abroad.* The Government scholarship programme will be continued and expanded. It is expected that, as in the past, scholarships and fellowships will be provided under multilateral and bilateral technical assistance arrangements, but Government itself proposes to finance a number of scholarships in fields commanding high priority.

D. PRICES AND INCOMES POLICY

1. Preserving Relative Price Stability

Price stability is one of the objectives of the Plan and one of the conditions for attaining the Plan targets. A general increase in prices could result from aggregate demand being in excess of aggregate supply, i.e. when the productive capacity of the country cannot meet the demand. But rising prices may also be the consequence of increasing costs of production ; or, most likely, of a combination of both demand-pull and cost-push factors. In the case of Cyprus, in addition to the above possible causes of inflation, another factor, foreign trade, is important as a determinant of the general price level. Both export and import prices are established in international markets over which Cyprus has no influence.

The Government will spare no effort to maintain relative price stability and avoid inflationary situations so that neither economic growth nor equitable income distribution may thereby be adversely affected. If excess demand is created during Plan implementation, it will be met by adjusting Government spending and through other fiscal and monetary measures. A series of measures are already planned to ease bottlenecks in the supply of certain factors of production, e.g. skilled labour. The " cost-push " side of inflation will be met through an " incomes " policy which will cover wages and salaries and other incomes. The general guide for non-inflationary wage increases is that such increases should not outstrip the growth in overall productivity. Once the latter is established and wage rate movements are related to it, other incomes are influenced accordingly.

2. Distribution of Income—Incomes Policy

Equitable distribution of income is one of the objectives of economic and social development. The means to achieve this objective during the period of the Second Plan will be :

(*a*) Average farm incomes, which, because of good crops, favourable export prices, Government subsidies etc. increased at a higher rate than non-farm incomes during the period 1961-1966 are still below the national average. The Plan will endeavour to maintain the high rate of growth of farm incomes mainly by assisting farmers to increase their productivity.

(*b*) Real non-farm wages and salaries will be allowed to increase in line with the growth in productivity. In this way inflationary wage increases will be avoided and incentives to entrepreneurs will not be removed·

(*c*) The salary structures and conditions of service of Government employees will be reorganized and adjusted so that in general they should not be out of line with the private sector. (In this connection reference is invited to Part IV, paragraph 7 (iii)).

(*d*) The increased provisions for social services and the improved and extended social insurance schemes will be contributory factors in improving income distribution.

(*e*) With regard to regional distribution of income, the Plan provides for substantial development expenditures in rural areas as well as for investments in low income areas in order to improve the economic and social conditions of less developed regions.

(*f*) Finally, the overall policy of full employment will enhance general economic and social welfare.

3. Effect of Devaluation on Prices

Price stability is also essential for preserving the competitiveness of exports and for exploiting the tourist potential of the Island. This competitiveness has recently been improved as a result of the devaluation of the Cyprus pound following the devaluation of the pound sterling.

It is still early to draw any conclusion about the impact of devaluation on the general price level. After an initial rise in prices, the forces of the market will now operate and it is the interplay of these forces which will ultimately determine the price level.

The Government is doing everything possible to ensure that only justified increases in prices are effected. At the same time certain measures are being taken in order to minimize the impact of devaluation on prices. Thus, import tariffs on goods of general consumption or on raw materials necessary for Cyprus industry have been substantially reduced or eliminated.

E. AVAILABLE RESOURCES AND THEIR USES

1. Aggregate Resources

In Section A reference was made to the expected rate of growth of Gross Domestic Product. In this Section the Gross National Product and other available resources will be examined.

Aggregate available resources and their respective uses for 1961, 1966 and 1971 are given in Table 10. The Gross National Product increased on the average by 5.3 per cent per annum during the period 1962-1966 and is planned to increase by an annual rate of 6.8 per cent in the coming five years. In fact, the Gross Domestic Product is expected to increase by about 7 per cent per annum, but a reduction in net factor income from abroad is anticipated and this will mean less dependence on foreign sources. Such dependence is further lessened by the possibility of a reduction in transfer payments and loans from abroad from £8.9 million in 1966 to £8.2 million in 1971, i.e. from 5.6 per cent to 3.7 per cent of disposable resources respectively.

Altogether disposable resources in 1971 will amount to £224.4 million, made up of £215.5 million of Gross National Product, £8.2 million of transfer payments and loans from abroad and a reduction of foreign exchange reserves by £0.7 million. These resources will be used for private and Government consumption and for gross fixed investment and changes in stocks, as shown in Table 10. Thus, an additional Gross National Product of £60.5 million will be created by the end of 1971, which, together with £6.2 million more from other resources will be used to finance additional private consumption of £37.7 million, additional government consumption of £7.4 million, and additional gross investment and changes in stocks of £21.6 million.

TABLE 10 **Aggregate Resources and Uses, 1961, 1966, and 1971,**
(*At Constant*, 1966 *Prices*—£mln.)

	1961	1966	1971	Percentage Shares in Total			Annual Rate of Change	
				1961	1966	1971	1961–1966	1966–1971
A. Disposable Resources	119.2	157.7	224.4	100.0	100.0	100.0		
1. Gross National Product	120.0	155.0	215.5	100.7	98.3	96.0	5.3	6.8
2. Transfer Payments and Loans from Abroad	13.0	8.9	8.2	10.9	5.6	3.7	—7.3	—1.6
3. Increase (—) or Decrease (+) of Foreign Exchange Reserves	—13.8	—6.2	+0.7	—11.6	—3.9	+0.3	—	—
B. Uses of Resources ..	119.2	157.7	224.4	100.0	100.0	100.0		
1. Private Consumption	88.2	112.1	149.8	74.0	71.1	66.8	4.9	6.0
2. Government Consumption	13.3	17.6	25.0	11.2	11.2	11.1	5.8	7.3
3. Gross Fixed Investment	15.9	27.5	45.7	13.3	17.4	20.4	11.6	10.7
4. Changes in Stocks	+1.8	+0.5	+3.9	1.5	0.3	1.7	—	—

Source : Planning Bureau.

2. Uses of Resources

Private consumption is planned to increase faster during this Plan than during the period 1962-1966. The faster rate of growth of private consumption will accommodate both population increases and substantial improvements in the standard of living. In spite of this increase, private consumption will occupy a smaller share in the overall uses of resources in 1971 as compared to 1966 and 1961, i.e. about 67 per cent in 1971, as against 71 per cent in 1966 and 74 per cent in 1961. This re-distribution of aggregate resources between various uses is in line with the policy of increasing the share of fixed capital formation. Thus fixed capital formation and changes in stocks will gradually absorb more and more of the country's resources so that by 1971 their share will rise to 20.4 and 1.7 per cent respectively, which compares favourably with similar percentage shares attained by developed countries.

Government consumption will also increase at a faster rate than before, although its share in the distribution of resources in 1971 will be slightly smaller as compared to 1966. Part of the increase in Government consumption expenditure will be accounted for by the larger development expenditure (other than fixed investment) in the public sector.

F. BALANCE OF PAYMENTS

1. Restructuring the Overall Balance of Payments—The First Plan

As already mentioned, attainment of a sound balance of payments position is one of the primary objectives of Government's development policy. This is because the balance of payments reflects the country's ability to pay its obligations to foreigners from foreign exchange earnings. If current earnings are in deficit over a period ot time, the purchase of goods and services from abroad has to be financed by running down foreign exchange reserves or through foreign loans. But reserves are not inexhaustible and loans have to be repaid sooner or later. Hence, the balance of payments has to be sound enough to enable the country to meet its external payments obligations and any normal outflow of capital from its current external receipts and normal capital inflow, without having to reduce its rate of growth and resort to unduly restrictive import policies. A summary of the balance of payments for 1961, 1966 and the forecast for 1971 is given in Table 11.

TABLE 11

Balance of Payments Summary, 1961, 1966 and 1971

(£mln.)

	1961	1966	1971	Totals	
				1962–66	1967–71
Imports of Goods and Services	41.5	58.7	80.0	251.3	354.9
Exports of Goods and Services..	30.0	51.1	67.3	195.6	302.6
Balance of Goods and Services	—11.5	—7.6	—12.7	—55.7	—52.3
Net Factor Income from Abroad	5.2	4.9	3.8	28.3	22.3
Balance of Goods and Services and Net Factor Income	—6.3	—2.7	—8.9	—27.4	—30.0
Transfer Payments : Total ..	7.9	4.1	4.3	28.1	21.5
Of which : Public	4.9	0.4	0.6	9.7	3.0
Private	3.0	3.7	3.7	18.4	18.5
Current Account Balance ..	+1.6	+1.4	—4.6	+0.7	—8.5
Long-term Loans and Private Investment Financing	2.6	2.1	3.9	13.9	16.9
Errors and Omissions	2.5	2.7	—	15.2	—
Change in Foreign Currency Holdings	+6.7	+6.2	+0.7	+29.8	+8.4
Situation in Foreign Assets ..	24.0	53.8	62.2	—	—

Sources : Central Bank of Cyprus and Planning Bureau.

An account of the evolution of the main components of the balance of payments during the First Plan period is given in Chapter 2 and further details are included in other relevant Chapters (e.g. Chapters on Trade, Agriculture, Mining, Manufacturing, Tourism). Briefly the salient features of the balance of payments during this period were as follows :

Although, during the whole period the Trade Account had been in deficit (the deficit having increased from £17.7 million in 1961 to £20.4 million in 1966) a favourable long-term trend is discernible (See Tables 12 and 13 below). Exports increased by 73.6 per cent and imports by 42.9 per cent so that in 1966 the ratio of exports to imports was about 58 per cent as against 47 per cent in 1961. At the same time a restructuring took place in the composition of both imports and exports. In the case of imports the share of capital goods and raw materials increased at the expense of consumer goods. As to exports, there was a spectacular increase in the exports of agricultural goods which more than doubled in value. The Invisible Account (foreign military expenditures, official grants, private remittances and tourism) resulted in substantial surpluses which more than offset the deficits on the Trade Account. Finally, the Capital Account resulted in a net capital inflow of about £14 million.

Thus, during this period the balance of payments did not impose any constraint on the country's economic development effort. In fact the performance was such that a surplus was realized in every single year ever since 1960. Foreign exchange reserves stood at about £17.0 million in 1960. In 1961 they increased to £24 million and represented seven months imports of goods and services. By 1966 they increased to £53.8 million and represented 11 months imports of goods and services. However, in spite of the improvement which has taken place, and the increase in foreign exchange reserves, the structural weaknesses of the balance of payments—i.e. heavy dependence on exogenous and unstable sources of foreign exchange earnings—continued to persist.

2. Prospects and Targets for the Second Plan

The higher rate of growth of the Second Plan will inevitably impose a strain on the balance of payments. As will be seen from Table 11, which indicates the evolution of the main components of the balance of payments up to 1971, the deficit in the Balance in Goods and Services is likely to increase from £7.6 million in 1966 to £12.7 million in 1971. Similarly, by 1971 there will possibly be a small Current Account and Overall Balance of Payments deficit although the level of foreign exchange reserves will be such as to suffice for about nine months imports of goods and services. At the same time, however, as explained below, further progress will have been made in the way of placing the balance of payments on sounder foundations.

2.1 Imports of Goods and Services and Other Payments

Imports of goods and services were £41.5 million in 1961 and £58.7 million in 1966, i.e. they were increasing at an annual rate of growth of about 7.2 per cent. For the 1967-1971 period a rate of growth of 6.4 per cent has been estimated. In arriving at this rate account was taken, *inter alia*, of major items of import substitution and saving in imports which is likely to result from a reduction in foreign military expenditure. A summary picture of imports of goods and services for 1961, 1966 and 1971 is given in Table 12. It will be seen that in 1971 capital goods are expected to account for 20 per cent of imports of goods and services as compared to 14.8 per cent in 1966. Raw materials will almost maintain their share whereas the share of consumer and other goods (including fuel) will drop to 34.5 per cent as against 38.2 per cent in 1966. With regard to the shares of the "invisible" items the 1966 position will more or less be maintained.

Imports of Goods and Services, 1961, 1966 and 1971
(£mln.)

TABLE 12.

	1961	1966	1971	Annual Rates of Change		Percentage Share of Each Item in Total Imports		
				1961–1966	1966–1971	1961	1966	1971
1. Merchandise (f.o.b.)	33.6	48.0	65.3	7.4	6.3	80.9	81.8	81.6
of which :								
1.1 Capital Goods	4.7	8.7	16.0	13.1	13.0	11.3	14.8	20.0
1.2 Raw Materials	10.5	16.9	21.7	10.0	5.1	25.3	28.8	27.1
1.3 Consumer and Other Goods (incl. fuel) ..	18.4	22.4	27.6	4.0	4.3	44.3	38.2	34.5
2. Freight, Insurance and Other Transportation ..	4.9	7.0	9.5	7.4	6.3	11.8	11.9	11.9
3. Travel	2.4	2.9	3.9	3.9	6.1	5.8	4.9	4.9
4. Government n.i.e. ..	0.4	0.5	0.7	4.6	7.0	1.0	0.9	0.9
5. Other Services ..	0.2	0.3	0.6	8.4	14.9	0.5	0.5	0.7
Total Imports of Goods & Services	41.5	58.7	80.0	7.2	6.4	100.0	100.0	100.0

Source : Planning Bureau.

2.2 Exports of Goods and Services and Other Receipts

Important structural changes are also envisaged in the exports of goods and services as shown in Table 13. Overall exports of goods and services will grow at 5.7 per cent per annum during the next five-year period, as compared to an 11.2 per cent in the past. The main items responsible for the slackening of the rate of growth are exports of minerals and an anticipated reduction in Government earnings not included elsewhere (i.e. earnings from Base and other military expenditures). With regard to mineral exports the forecast is that their 1966 volume will be maintained, but that the high prices of 1966 are likely to be reduced to longer-period average levels.

Exports of Goods and Services, 1961, 1966 and 1971

(£mln.)

TABLE 13

	1961	1966	1971	Annual Rates of Change		Percentage Share of Each Item in Total Exports		
				1961–1966	1966–1971	1961	1966	1971
1. Merchandise (f.o.b.) of which :	15.9	27.6	42.3	11.7	8.9	53.0	54.0	62.9
1.1 Minerals	8.4	12.2	11.7	7.7	—0.8	28.0	23.9	17.4
1.2 Agricultural Exports	7.1	14.4	27.9	15.3	14.2	23.7	28.2	41.5
1.3 Other	0.4	1.0	2.7	20.1	21.9	1.3	1.9	4.0
2. Freight, Insurance and Other Transportation	0.8	1.1	2.0	6.6	12.7	2.7	2.2	3.0
3. Travel	2.8	3.6	11.6	5.2	26.3	9.3	7.0	17.2
4. Government n.i.e.	9.4	17.1	8.9	12.7	—12.3	31.3	33.5	13.2
5. Other Services ..	1.1	1.7	2.5	9.1	8.0	3.7	3.3	3.7
Total Exports of Goods & Services	30.0	51.1	67.3	11.2	5.7	100.0	100.0	100.0

Source : Planning Bureau.

Agricultural exports are expected to maintain the high pace of growth observed during the First Five-Year Plan. By 1971 this item will account for 41.5 per cent of total exports. This reflects the emphasis of the Plan on agricultural development. Other merchandise exports, mainly manufactured goods, are also anticipated to increase at a fast rate. Tourist earnings will be more than trebled given that normal conditions will prevail.

2.3 Other Items in the Balance of Payments

Net factor income from abroad (which includes interest on foreign investment, the remuneration of Cypriots employed by the Military Authorities etc.) is expected to be reduced by about £6 million for the whole five-year period. A similar reduction in transfer payments is also anticipated. On the other hand, some increase is expected in net capital inflow.

2.4 Foreign Exchange Reserves

In spite of the small deficit which may develop by 1971, it is expected that the foreign exchange assets will increase as compared to 1966. But although in 1966 foreign exchange reserves were able to finance eleven months imports of goods and services, by 1971 the reserves will suffice for about nine months imports. This level is, however, considered to be satisfactory. But what is of more significance is that by 1971 the economy as such will have undergone further transformation so that it may be possible in the post-Second Plan period to reverse the deficit trend in the current account and the overall balance. In this context, the strain imposed on the balance of payments during the Second Plan should be regarded as reflecting the accelerated and determined effort of the economy to reshape and establish itself on sounder foundations. And if this will not be possible to achieve in the span of a five-year period, the foreign exchange asset position and the ability of the country to shoulder a much heavier debt burden, should enable it to continue its efforts beyond the Second Plan period.

G. FINANCING OF THE PLAN

1. Overall Financing of Fixed Investment and Changes in Stocks

Internally, monetary stability will be preserved if, in addition to preventing incomes from outstripping the sustainable growth of output, adequate financing of the Plan is secured from real resources. The policy with regard to incomes was outlined in Section D. A first reconnaissance of the problem of financing was made in Section E where the uses of resources were set out. In this Section the financing of fixed investment and other development expenditure is analysed.

Total fixed investment and changes in stocks necessary to sustain the higher rate of growth of GDP during the Second Five-Year Plan were estimated at about £196 million. As in the past, the financing of this capital formation and changes in stocks will come both from domestic and foreign sources. It has been estimated that domestic savings for the whole period 1967-1971 will be of the order of £143.7 million. If these savings are realized and properly mobilized and channelled, a balance of about £52.3 million of investment and changes in stocks will be left to be financed from foreign sources.(1) Thus foreign financing of fixed investment and changes in stocks will account for 26.7 per cent in the period 1967-1971 as against 44.6 per cent in the previous five years. When only Net Capital Inflow is taken into account, foreign financing accounted for 23.3 per cent of fixed investment and changes in stocks during 1962–1966 and will account for about 8.6 per cent during 1967–1971.

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(1) Foreign financing as defined here includes Net Factor Income from abroad as well as Net Transfer Payments on Current Account and Net Capital Inflow.

2. Financing in the Public Sector

Out of a total fixed investment of £186 million for the whole period 1967-1971, the share of the Public Sector will be about £50 million, including £9.6 million of investment by Public Enterprises. On top of these the Government is planning to spend another £16.6 million as other development expenditure. In total the Public Sector's development budgets for the 5-year period will amount to £66.6 million. This represents a significant increase over the period 1962-1966 when total development expenditures were about £39 million.

As in the past, development finance in the Government Sector will be provided, to a large extent, from current budgetary surpluses (Table 14). The Government expects tax receipts to increase mainly in consequence of rising incomes and purchases and the reform of fiscal administration.

Sources of Development Finance in the Public Sector, 1962–1966 and 1967–1971 (£mln.)

TABLE 14

	1962–1966	1967–1971		1962–1966	1967–1971
A. Financial Requirements :			B. Sources of Finance		
1. Fixed Capital Investment	15.5	40.4	1. Government Current Account Surplus	22.2	43.7
2. Other Development Expend. by Govt.	11.2	16.6	2. Public Enterprises Savings	5.9	6.7
3. Fixed Capital Investment by Public Enterprises	10.4	9.6	3. Additional Borrowing	10.5	16.2
4. Other Develop. Expend. by Public Enterprises	1.5	—			
Total	38.6	66.6	Total	38.6	66.6

Source : Planning Bureau.

Out of a planned total development expenditure of £66.6 million, £50.4 million (or about 76 per cent) are expected to be financed from Government and Public Enterprises own revenues and the balance (£16.2 million) from borrowing, mostly from abroad. During the First Plan public development expenditure was financed to the extent of 72 per cent from Public Sector own resources and 28 per cent from outside borrowing. Part of the borrowing from abroad was made by the Electricity Authority of Cyprus (from I.B.R.D.). During 1962-1966 Public Corporations development expenditure was £11.9 million consisting mainly of fixed investment. About

50 per cent was financed from their own savings and the rest from borrowing in the form of external loans and suppliers credits. During the Second Plan, Public Enterprises contemplate to undertake fixed capital formation of about £9.6 million. About £6.7 million, or almost 70 per cent, will be financed from their own revenues and the rest from external sources.

3. Financing in the Private Sector

Investment activity in the private sector is expected to be stepped up from £91.1 million during the period 1962–1966 to £136 million during 1967–1971. In addition, investment in stocks will rise from £8 million to £10 million respectively. Thus, financial requirements of the order of £146 million will be necessary. If the foreign resources referred to earlier in this Section are realized, no problem is expected to arise as far as the existence of adequate funds for the private sector investment programme is concerned. The question will rather be one of channelling funds so as to meet the Plan requirements. This is discussed in the following paragraph.

4. Mobilization and Channelling of Private Domestic Savings

The above analysis has indicated the sources from which the Plan will be financed. It has also shown that, if the assumptions underlying the projections materialize, there will be enough financing forthcoming to meet the requirements of the Plan. However, it will be necessary during the period of the Plan to take a number of measures designed to mobilize savings and channel them in the desired directions. As far as mobilization of voluntary savings is concerned, Cyprus already has a developed banking system and both Commercial and Cooperative Banking Institutions will continue to play an important role in this respect. But what is even more important at the present time in Cyprus is the diversion and channelling of savings to priority fields of activity, the use of savings to finance productive investment in accordance with the needs and priorities of the Plan. To facilitate such channelling of savings it is proposed :—

(*a*) To encourage the establishment of public companies and to examine the feasibility of setting up a Stock Exchange now or at a later stage. This would not only promote the mobilization of savings, but would also broaden the ownership base of firms the majority of which have so far tended to be family concerns. The issue of Treasury Bills and Government bonds will facilitate this development.

(*b*) To promote a more effective utilization of bank money through :

(i) the continued differentiation of interest rates so as to encourage time deposits at the expense of demand deposits ;

(ii) the rediscounting facilities of the Central Bank ;

(iii) the regulation of the transfer abroad of surplus Bank assets. This will, *inter alia*, enable the Central Bank to use the interest rate as an instrument of monetary policy and to determine a structure of rates which would promote economic development ; and

(iv) the encouragement of commercial and other banking institutions to provide selectively medium and long-term credit.

(*c*) To give further support and encouragement to the Cyprus Development Corporation so that it may be able to play an increasingly important role not only by providing long-term finance, but also by carrying out feasibility studies and initiating or promoting projects.

(*d*) To identify and publicize investment opportunities.

(*e*) To provide fiscal and tax incentives so as to encourage savings and investment in priority fields.

(*f*) If necessary, to introduce such credit policies as to influence the allocation of investment resources and thereby the pattern of development in the private sector.

H. REGIONAL DEVELOPMENT

1. Existing Regional Characteristics

The following is a brief review of the economic conditions and characteristics of regions based on such data as are now available. (Due to statistical limitations, the six administration districts are treated as separate economic regions) :—

1.1 Interregional Migration

During the period between the last two census years (1946–1960) the rural population of Cyprus increased by 0.7 per cent per annum, and that of urban areas by 4.2 per cent, reflecting the urbanization which has been taking place. It is interesting to note that between 1931 and 1946 the above rates were 1.4 and 2.8 per cent respectively. The overall increase of population was 1.7 per cent annually for both periods, 1931–1946 and 1946–1960. (Table 15).

Distribution of Population by Location at Census Years

TABLE 15

Area	1931	Rate of Growth 1931–46	1946	Rate of Growth 1946–60	1960
URBAN AREAS : ..	76,351	2.8	115,808	4.2	205,983
Nicosia Town ..	23,677	2.5	34,485	2.0	45,490
Nicosia Suburbs	9,820	4.4	18,839	7.2	49,853
Kyrenia Town ..	2,137	2.1	2,916	1.2	3,441
Famagusta Town	8,979	4.0	16,194	5.6	34,752
Larnaca Town ..	11,872	1.5	14,772	2.1	19,807
Limassol Town	15,349	2.7	22,799	4.7	43,561
Paphos Town ..	4,517	1.7	5,803	3,2	9,079
RURAL AREAS ..	271,608	1.4	334,306	0.7	367,583
Nicosia Villages..	76,513	1.3	92,641	1.2	108,940
Kyrenia Villages	20,522	1.4	25,258	0.7	27,505
Fam/sta Villages	62,493	1.5	78,280	0.1	79,557
Larnaca Villages	30,336	1.4	37,417	0.2	38,812
Limassol Villages	42,492	1.4	52,622	1.4	63,701
Paphos Villages	39,252	1.4	48,088	0.1	49,068
Total ..	347,959	1.7	450,114	1.7	573,566
Nicosia District	110,010	1.9	145,965	2.4	204,283
Kyrenia District	22,659	1.5	28,174	0.7	30,946
Fam/sta District	71,472	1.9	94,474	1.4	114,309
Larnaca District	42,208	1.4	52,189	0.8	58,619
Limassol District	57,841	1.8	75,421	2.5	107,262
Paphos District	43,769	1.4	53,891	0.5	58,147

Source : Statistics and Research Department, Statistical Abstract.

The following observations may be made in this connection. Nicosia and Limassol Districts have been net receivers of population from other areas ; the rest were losing population to the former or abroad. Among the latter, Paphos and Kyrenia have sustained the most noticeable losses. Apart from interregional migration, with the only exception of Kyrenia, the tendency can be traced in all districts for people to move from their village to the nearest town. In spite of these developments, the drain on the population of any district, rural or urban area has not been such as to lead to an absolute reduction from one census year to another.

1.2 Distribution of Economic Activities

An overall picture of economic activities in each district may be obtained by examining the distribution of its economically active population by sector. The only available information is for 1960 (Table 16).

TABLE 16

Distribution of Economically Active Population by Sector and by District, 1960 Census of Population

	Whole Cyprus	Nicosia		Kyrenia		Famagusta		Larnaca		Limassol		Paphos	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
1. Agriculture, etc.	94,776	24,365	28.9	5,124	41.0	21,624	46.1	7,365	32.3	18,018	38.0	18,280	65.6
2. Mining and Quarrying ..	5,361	3,148	3.7	95	0.8	43	0.1	517	2.3	1,000	2.1	558	2.0
3. Manufacturing etc.	32,357	12,163	14.4	1,907	15.2	5,535	11.8	4,054	17.8	6,288	13.2	2,410	8.7
4. Construction	20,447	7,396	8.8	1,539	12.3	3,954	8.5	1,706	7.5	4,372	9.2	1,480	5.3
5. Transport, etc.	9,601	3,558	4.2	545	4.4	1,928	4.1	992	4.4	1,940	4.1	638	2.3
6. Wholesale Trade, etc. ..	16,230	7,322	8.7	660	5.3	2,921	6.2	1,674	7.3	2,767	5.8	886	3.2
7. Public Administration and Defence	19,739	9,516	11.3	1,126	9.0	2,925	6.2	1,434	6.3	3,010	6.4	1,728	6.2
8. Entertainment & Recreation	5,101	2,137	2.6	265	2.1	847	1.8	481	2.1	1,014	2.1	357	1.3
9. Other	21,972	9,894	11.7	1,016	8.1	3,471	7.4	1,890	8.3	4,323	9.1	1,378	4.9
10. Military Authorities ..	(1) 16,239	4,824	5.7	229	1.8	3,642	7.8	2,671	11.7	4,743	10.0	130	0.5
Total	241,823	84,323	100.0	12,506	100.0	46,890	100.0	22,784	100.0	47,475	100.0	27,845	100.0
	(100)	(34.9)		(5.2)		(19.4)		(9.4)		(19.6)		(11.5)	

Source : Department of Statistics and Research ; Census of Population and Agriculture, 1960, Volume V.

(1) This figure includes about 6,500 British civilians employed in the British Bases. British civilians are not accounted for in the Economically Active Population given elsewhere in the Plan.

It will be observed that about 35 per cent of the economically active population was in Nicosia District while the figures for Limassol and Famagusta were 19.6 and 19.4 per cent respectively, for Paphos 11.5, for Larnaca 9.4 and for Kyrenia 5.2 per cent. Comparing these figures with the percentage distribution of total population in 1960 (Table 17, Col. 1), it will be seen that each district has contributed about the same proportion to active population as to total population.

The most " agricultural " district was Paphos with 65.6 per cent of its economically active population engaged in this activity. Nicosia, with a more balanced distribution of labour force as between the various sectors than any other district, had only 28.9 per cent of its workpeople engaged in agriculture. In the case of other districts the percentage varied within this range. In all districts, however, agriculture employed the highest single percentage of labour.

The next sector with a high share in employment was Manufacturing. In Larnaca 17.8 per cent of the workpeople were employed in this activity, while the least " industrialized " district was Paphos.

In order to examine whether employment was equally productive in all districts, Manufacturing industry has been selected for which data are available from the Census of Industrial Production (Table 17). This aspect is important because productivity differentials could lead to wage and profit differentials, which could in turn cause labour and capital concentration in the more " productive " regions.

Census of Industrial Production, 1954 and 1962; Manufacturing Industry.

TABLE 17

District	Population per cent 1960	Persons engaged Number		Persons engaged per cent		Value added per cent 1962	Value added per person engaged 1962 £	Annual Rate of Change of persons engaged 1954–62
		1954	1962	1954	1962			
Nicosia ..	35.6	9,565	13,169	36.4	42.6	49.5	425.8	4.1
Kyrenia ..	5.4	889	912	3.4	2.9	1.6	193.7	0.3
Famagusta	19.9	3,799	4,152	14.4	13.4	8.8	239.7	1.1
Larnaca ..	10.2	5,195	4,756	19.8	15.4	6.5	154.0	—1.1
Limassol	18.7	4,449	5,447	16.9	17.6	29.2	607.1	2.6
Paphos ..	10.2	2,396	2,501	9.1	8.1	4.4	198.0	0.5
Whole Cyprus	100.0	26,293	30,937	100.0	100.0	100.0	365.7	2.1

Sources : **Statistics and Research Department, Statistical Abstract, 1966.**
Planning Bureau.

It will be seen from Table 17 that in 1962 Nicosia District provided about 43 per cent (36.4 per cent in 1954) of all workpeople engaged in Manufacturing, whereas its contribution to total value added in Manufacturing amounted to about 50 per cent. Limassol also had a higher percentage contribution to value added than to employment (29.2 per cent and 17.6 per cent respectively). The remaining districts contributed proportionately more to employment than to value added. One reason for this is perhaps the small size of industrial units in these districts. Thus, whereas in Nicosia and Limassol the number of establishments employing five persons and over exceeded those employing 1-4 persons, in all other districts the situation was the reverse. It is not surprising, therefore, that the industrial labour force increased by 4.1 per cent per annum in Nicosia and by 2.6 per cent in Limassol, i.e. at rates of growth well above those recorded in other districts.

1.3 Employment Situation by District

Apart from earnings differentials, opportunities for employment usually play a significant role in labour mobility. For this reason, unemployment statistics by district may also provide an indication of the economic situation in each district. During the last three years, unemployment by district has been as follows :

	1964		1965		1966	
Nicosia/Kyrenia ..	2,286	(40.6)	1,547	(38.4)	1,265	(36.3)
Famagusta	1,147	(20.4)	861	(21.4)	736	(21.1)
Limassol	1,082	(19.2)	834	(20.7)	846	(24.3)
Larnaca	543	(9.6)	372	(9.2)	227	(6.5)
Paphos	577	(10.2)	416	(10.3)	410	(11.8)
Whole of Cyprus ..	5,635	(100.0)	4,030	(100.0)	3,484	(100.0)

Source : Ministry of Labour and Social Insurance, Annual Report.

Since 1961 the overall absolute level of unemployment has been declining (with a temporary relapse in 1964). For the last three years this was true for practically all districts. Certain structural changes have taken place, however. The relative shares of Nicosia/Kyrenia and Larnaca Districts in the total number of unemployed have consistently been declining, while those of Limassol and Paphos have been increasing. After an initial rise, the share of Famagusta declined. One must bear in mind the limitations of these statistics; it is not impossible that people unemployed in one region may register in another where better opportunities for employment exist.

Comparing now the regional distribution of the economically active population in 1960 (Table 16—last line) and the share of each district in the overall unemployment figures given above, the following conclusions may be drawn. In 1964, Nicosia/Kyrenia districts had the same share in unemployment as in active population (1960), but since then the former figure has been declining. Famagusta and Limassol come up with a higher unemployment rate than what they would have had if unemployment had been evenly distributed. These results are of course tentative since the distribution of the economically active population may have changed since 1960 because of regional migration.

1.4 Social and Other Conditions in the Districts

Social and other amenities are both the consequence of economic prosperity as well as a prerequisite for creating a climate conducive to economic development. Statistics on social and other conditions obtaining in the districts are given in Table 18.

TABLE 18

Social and Other Statistics by District

District	Population per Doctor Ratio (1966)	Gen. hosp. & Health Centres Beds per 1,000 of population (1965)	Primary School Pupils per Teacher Ratio (1965–66)	Commun. Secondary Schools Pupils per Teacher Ratio (1965–66)	Percent. of villages with house-to-house piped water supply (1966)	Road density : Miles of Road per sq. mile (1964)
Nicosia ..	824	2.66	36.1	25.4	48.3	1.39
Kyrenia ..	2,608	1.25	31.8	19.1	42.6	
Famagusta	1,704	1.11	36.6	23.9	56.1	1.65
Larnaca ..	3,361	1.45	35.6	18.1	39.0	0.92
Limassol	1,720	1.25	35.0	24.3	60.5	1.42
Paphos ..	2,248	1.33	33.1	22.5	36.4	1.14
Whole Cyprus	1,322	1.75	35.3	23.7	47.9	1.35

Sources : Department of Statistics and Research.
Planning Bureau.

2. Policy Objectives

As already stated in this Chapter, it is one of the Plan objectives to ensure an equitable distribution of generated incomes as between the various sections of the population. A related objective is to promote development so as to ensure an equitable distribution of income and services as between regions. Because of the size of Cyprus, the development of the means of communication and the mobility of labour, the problem of wide disparities between regions and the concomitant problem of urbanization have not assumed such serious proportions as in certain other countries. But this is not to deny the fact that the problem exists and that more attention should be directed to the problems of regions which are lagging behind. There are unfortunately no statistical data on regional income distribution and no adequate information concerning the economic characteristics and potentialities of individual areas and regions. However, on the basis of such information as is available an effort has been made in the Plan to allocate resources and investments so as to step up economic activity in certain low-income regions. It is proposed during the period of Plan implementation to complete the surveys which have already been undertaken and to carry out further studies in order to assess the economic potential of the various regions and to collect and compile data concerning regional income distribution. In the light of such surveys and studies regional programmes may be undertaken and projects may be so located as to revitalize comparatively poorer regions. The formulation of programmes and the selection of projects, however, will be so designed as to have the least adverse effect on overall growth and productivity targets ; and in this way social objectives will be attained with a minimum of sacrifice.

PART III

Development by Sector

CHAPTER 5

AGRICULTURE, ANIMAL HUSBANDRY, FORESTS, FISHING AND RURAL DEVELOPMENT

A. AGRICULTURE

1. The role of Agriculture in the Cyprus Economy

The First Five-Year Plan recognised agriculture as "the backbone of the Cyprus economy, not only because of its contribution to the national product and the provision of employment for the majority of our people, but also because our local industry and exports are largely based on it". As will be seen from subsequent paragraphs, the strategy of the Second Plan is to maintain, and if possible, to increase the essential role which agriculture has to play in Cyprus economic development. In the next few paragraphs, a review will be made of the progress recorded during the First Plan period. An outline will then be given of the main objectives and targets of the Second Five-Year Plan. Consideration will thereafter be given to ways and means for attaining these targets.

2. Progress during the First Five-Year Plan—Present State of Agriculture

Important strides forward were made in the agricultural sector during the period under review. Indeed the achievements in production and exports are impressive. (In this connexion, reference is also invited to the brief review set out in Chapter 2).

2.1 Gross Output and "Value Added"

2.1.1 Production (Gross Output)

As Table 1 indicates, both plant and animal production increased substantially not only during the Plan but also during the whole post-Independence period.

TABLE 1 **Agricultural Gross Output, 1960, 1961 and 1966**

	Value (£mln.) at Current Market Prices			Value (£mln.) at Constant, 1966 Prices		
	1960	1961	1966	1960	1961	1966
1. Plant Production ..	14.20	18.55	24.67	15.27	19.61	24.67
2. Livestock (1)	6.66	7.05	11.18	6.58	7.01	11.18
3. Other (Forests Fishing, Hunting, etc.)	2.63	2.85	3.28	2.63	2.85	3.28
Total ..	23.49	28.45	39.13	24.48	29.47	39.13

Source : Planning Bureau.

(1) Excluding animal stock changes.

(*a*) *Plant Production*

Plant production, which in 1966 comprised 63 per cent of all agricultural output (at current market prices), increased by about 74 per cent between 1960 and 1966 and by 33 per cent between 1961-66. This corresponds to annual compound rates of growth of 9.6 per cent and 5.9 per cent recpectively. Both 1960 and 1966 were relatively dry years, and although 1961 was not a particularly good year, a better idea of output increase may be obtained if one compares 1966 with the average production of 1960-61. In such a case, the increase in plant production recorded was about 51 per cent and the annual rate of growth 8.5 per cent. The corresponding volume of production, measured at constant 1966 prices, increased by about 42 per cent or at an annual rate of 7.2 per cent. As will be seen, the major engine of growth was irrigated land.

(*b*) *Animal Production*

The expansion in animal production also exceeded all expectations. The volume of output increased by 59.5 per cent between 1961 and 1966 and its current value by about 58.6 per cent. With such a high rate of growth, animal production was able to increase its share in total agricultural output from about 24 per cent to about 28 per cent. The main contributors to this increase were pig and cattle meat, milk, poultry and eggs. But despite the rapid growth in local production of meat and dairy products, large quantities of these products continue to be imported.

(*c*) *Other Agricultural Production*

Other agricultural production represented only 8.4 per cent of total agricultural output in 1966. It comprises the output of Forestry (£0.2 million), Fishing (£0.3 million), Hunting (£0.4 million) and other ancillary activities (£2.4 million). The rate of growth of " other agricultural production " has been around 3 per cent during the First Five-Year Plan. This is well below the average for the sector as a whole.

2.1.2 Value Added by the Agricultural Sector

Value added, or net output, is a good measure of an activity's or sector's income. It consists of the value of gross output (=production) less material inputs or intermediate products. Looked at from another point of view this value added represents the wages, salaries, profits and other forms of income that accrue in productive activity.

Measured in real terms(1), value added in Agriculture increased at the compound rate of 7.2 per cent per year during 1961–66, 11.8 per cent during 1960–66 and 9.2 per cent between the average of 1960-61 and 1966(¹). This is a very high rate and is reflected in the substantial improvement in the standard of living of most rural areas. As a result, the contribution of Agriculture to Gross Domestic Product increased from about 18 per cent in 1961 to about 20 per cent in 1966.

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(1) At constant, 1966 prices.

2.2 Exports

In the export field also the performance of Agriculture has been spectacular. As will be seen from Table 2, during the brief span of a five-year period, the value of agricultural exports more than doubled.

Agricultural Exports, 1961 and 1966

TABLE 2 (*Value*—£mln.)

	1961	1966
(1) Plant Origin Exports	6.7	13.9
(*a*) In Raw Material State	4.6	10.0
(*b*) Processed	2.1	3.9
(2) Animal Origin Exports	0.4	0.5
(*a*) In Raw Material State	0.1	0.1
(*b*) Processed	0.3	0.4
(3) Total all Agricultural Origin Exports	7.1	14.4
(*a*) In Raw Material State	4.7	10.1
(*b*) Processed	2.4	4.3

Source : Compiled by the Planning Bureau on the basis of the Import & Export publications of the Statistics and Research Department.

With a contribution of 53 per cent to total domestic exports, agricultural exports have now displaced minerals as the leading export group. Citrus and potatoes together accounted for 54 per cent of the increase in agricultural exports. Grapes and other vine products accounted for another 22 per cent of the increase. As will be seen later on, the prospects for such exports are equally good, if not better, during the Second Five-Year Plan.

2.3 Employment, Productivity and Incomes

Employment in the agricultural sector remained practically static during 1961-66, which suggests a continuation of the trend towards urbanization. According to available data this sector was employing 43.6 per cent of all gainfully employed in 1961 and 42.4 per cent in 1966. There are indications, however, that an appreciable proportion of these percentages received supplementary employment from other sectors of the economy(²).

(¹) Revised estimates made by the Planning Bureau.

(²) According to the 1960 Census, 44 per cent of the land holders reported that their main occupation was not that of farming the land they held.

Productivity, as measured by value added per employee, was rising rapidly, 6.8 per cent per year during 1961-66 and 8.9 per cent between the average of 1960-61 and 1966. The main reasons for this high productivity rate, as it will be seen later on, was the expansion in irrigated land, the shift to high yielding crops, the use of more fertilizers and pesticides, mechanization, a new impetus given by animal production and the relative stagnation in rural population.

The increase in productivity is also a good indicator of the growth in agricultural incomes. Value added per person gainfully employed in Agriculture (part-time or full-time) increased by 53 per cent between the average of 1960-61 and 1966. In absolute terms it rose from £169 in 1960 to £207 in 1961 and £288 in 1966. Effective incomes, however, should be higher considering that this is the average of all people partly or wholly engaged in Agriculture and that a large proportion of the farming community have supplementary incomes from activities outside the strict agricultural sector. On the other hand, agricultural incomes are still below the national average, especially in regions where low-yielding crops predominate and alternative sources of employment are limited.

2.4 Under-employment *versus* Shortage of Labour

Cyprus is currently experiencing the phenomenon of simultaneous underemployment and shortage of hands (at least in certain areas and during certain periods of the year). A recent study revealed that underemployment in the agricultural sector as a whole corresponded to 15,000 people or about 15.5 per cent of the sector's labour force in 1966. However, such underemployment varied from region to region and from season to season. Thus, in regions with limited access to alternative sources of employment, e.g. vine-growing areas and mountain regions, underemployment was higher. In regions in which availability of irrigation water or other factors permitted more diverse activities it was lower.

Actual unemployment recorded in Agriculture was very low.

However, despite the existence of unemployment and underemployment during the past two or three years peak season labour demand was such as to create a shortage of hands. Rapid growth in Agriculture and the drift of villagers to the towns may probably have been responsible for this.

2.5 Fixed Investment

Fixed investment in Agriculture consists mainly of capital sunk in machinery, irrigation works, soil conservation works, and stables. It is estimated that about £14.4 million (¹) were invested in this

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(¹) At constant, 1966 prices.

way by the farmers and the Government during 1962-66. In addition, the Government provided a further amount of £7 million of non-fixed investment development funds for agricultural development purposes.

2.6 Area under Cultivation and Land Productivity

2.6.1 Extent of Cultivation

Table 3 indicates the broad uses to which the entire area of the Island is put. Traditional estimates put total agricultural land at about 4½ million donums or 65.5 per cent of the total area of the Island. However, as Table 4 shows, the actual area cropped in 1966 was 2.4 million donums. An additional one million donums is estimated to remain fallow. If cultivated land (including fallow) is subtracted from the area classified as " agricultural land ", there is left an area of 1,100,000 donums which presumably comprises scrub, deserted or otherwise uncultivated land.

TABLE 3

Area of Cyprus by Broad Use, 1966

	Percentage Share in Total	Area Donums
Agricultural land	65.5	4,530,000
of which :		
(i) Cultivated land (incl. fallow)	49.6	3,430,000
(ii) Scrub, deserted or otherwise uncultivated private land	15.9	1,100,00
Grazing land : Communal property and vacant State lands	8.8	609,000
Forest land : State, Communal and Private Forests	18.7	1,296,000
Town and village sites, roads, rivers and river beds, etc.	7.0	480,000
Total Area of Cyprus	100.0	6,915,000

Sources : Department of Agriculture,
Department of Forests,
Planning Bureau.

It appears, therefore, that there are around 3.4 to 4.5 million donums of land " usable " for agricultural purposes. But " usable " need not necessarily coincide with " suitable " for there are areas which cannot be classified as suitable for agricultural production. Nor would it be a sound economic proposition to develop every bit of cultivable land. There is marginal land, which is either too poor or too expensive to improve. But this argument must not be carried too far. There are large areas outside the forests which are not used for production, but which are suitable for planting trees (e.g. carobs, olives and almonds) or for cultivating forage crops for animals. As will be noted later on, it is the recognition of this fact that has prompted the Government to initiate a number of relevant projects.

An examination of the land use pattern outlined above leads to the conclusion that the prospects for extensive cultivation are limited and that the emphasis should, therefore, be on intensive methods of cultivation. This conclusion is supported by past and recent trends in land use structure, agricultural inputs and growth in land productivity.

2.6.2 Land Use Structure and Trends

The land use structure, as summarised in Table 4 below, demonstrates, *inter alia*, that during the post-independence period 1960-66 there was a significant structural shift in favour of irrigated crops.

Cultivated Area by Main Category of Crop, 1960, 1961 and 1966

TABLE 4.

	1960 (000 don.)	1961 (000 don.)	1966 (000 don.)	Percentage Change	
				1960–66	1961–66
A. *Irrigated Crops :*					
1. Field and Other Non-Tree Crops	99.4	114.3	135.6	36.4	18.7
2. Tree Crops	93.4	100.1	132.5	41.8	32.3
Total Irrigated Crops	192.8	214.4	268.1	39.0	25.0
B. *Dryland Crops :*					
1. Field and Other Non-Tree Crops	1,341.7	1,363.0	1,376.8	2.6	1.0
2. Tree Crops (incl. Vines)	746.0	752.2	784.6	5.2	4.3
Total Dryland Crops	2,087.7	2,115.2	2,161.4	3.5	2.2
C. *Total All Crops :*					
1. Field and Other Non-Tree Crops	1,441.1	1,477.3	1,512.4	4.9	2.4
2. Tree Crops (incl. Vines)	839.4	852.3	917.1	9.3	7.6
Total All Crops	2,280.5	2,329.6	2,429.5	6.5	4.3
Fallow Land	1,050.0	1,050.0	1,000.0	—4.8	—4.8
Total Cultivated Area	3,330.5	3,379.6	3,429.5	3.0	1.5

Source : Compiled by the Planning Bureau on the basis of data provided by the Department of Agriculture.

Table 4 brings to light an important feature of the overall land use pattern and this is the fact that, despite the unprecedented expansion in irrigation activity during the First Five-Year Plan, by 1966 land under regular irrigation comprised only 11 per cent of total cropped land and dry farmed land the other 89 per cent.(1)

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(1) The estimate given here is in respect of land estimated actually to have been irrigated. It differs from that published in the 1966 Economic Report due to differences in definition and coverage.

More specifically, regularly irrigated land increased its share in total cropped land from 8.5 per cent in 1960 to 11 per cent in 1966. In absolute terms, a total of about 75,000 donums was brought under irrigation and an additional 74,000 donums came under dryfarmed crops. It is also estimated that the area under fallow land was reduced by some 50,000.

It is interesting to note that the main crops responsible for the unprecedented expansion in irrigated land during 1960–1966 were citrus and potatoes. Some 40,000 donums of citrus and 27,500 donums of potatoes were added during the period under review. The cultivation of vegetables and deciduous trees (apples, pears, etc.) was also stepped up. With regard to dryfarmed crops, the main expansion was in cereals, vines (¹), green fodders and dryland trees, e.g. carobs, olives and almonds. Some shrinkage in cultivated area was observed in the case of legumes and industrial crops (tobacco, sesame, aniseed, etc.).

2.6.3 Land Productivity and Water

The role of irrigation water in Cyprus agricultural development is underlined by the fact that, although in 1966 irrigated crops covered only 11 per cent of the cultivated land, they contributed 52 per cent to total plant production. In contrast, dryland crops which covered 89 per cent of the area contributed the balance. Evidently, per donum yields from irrigated areas are, on the average, eight and a half times greater than those from dry-farmed areas. Under such circumstances water becomes a key factor, a pace-setter in the Island's agricultural development.

Per donum yields,(²) which are a good measure of land productivity, were increasing for the Island as a whole at the rate of 6.1 per cent per year between 1966 and the average of 1960–61. The rate of growth in the productivity of irrigated areas was higher than that of rainfed crops despite the fact that towards the latter part of the period under review extensive citrus plantations had been established which did not bear any fruit. In any case, the growth in productivity of both irrigated and dry-farmed areas indicates clearly the definite and continuous progress being made in farming methods.

2.7 Farming Practices and Water Use Efficiency

In spite of the fact that water is of such a vital importance in agricultural development but at the same time a very scarce resource, some 40-50 per cent of the water reaching the fields is wasted due to the existence of earthen channels, unlevelled land

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(¹) Including table grapes.

(²) Value of per donum yields at constant, 1966 prices.

resulting in uneven distribution within the field and improper irrigation practices. The disturbing fact is that much of this wastage occurs in the areas of Morphou, Famagusta and Limassol which suffer from over-pumping of their aquifers.

A project aimed at improving water use efficiency was initiated in 1965 and by the end of 1966 about £184,000 had been spent by the Government for this purpose. A large number of farmers have applied for participation in the project which will be continued during the period of the Second Plan. Closely related to the Water Use Improvement Project is the Water Control Programme, which will be described in greater detail later on in this Chapter.

2.8 Selected Agricultural Inputs

As already pointed out, the extent of land suitable for cultivation is limited and this is particulary so when one takes into account the constraints set by the scarcity of water. Consequently, the future of Cyprus agriculture lies in the adoption of intensive methods of cultivation—mechanization, water use, use of improved farming methods, use of the right amounts of fertilizers and types of pesticides and the development of low-cost feeding stuffs for animals.

As will be seen from Table 5, during the period of the First Plan the trend towards a more intensive agriculture was gaining momentum and the increases in land and labour productivity recorded were in no small measure attributable to substantial improvements in factor inputs.

TABLE 5

Selected Agricultural Inputs, 1961 and 1966

	1961	1966	Percentage Increase 1961–66
(1) Agricultural Tractors (No.) ..	3,100	5,596	80.5
(2) Fertilizer Imports (Tons) ..	79,930	94,690	18.5
Amount of Fertilizer per Donum (Tons) per Year	0.0343	0.0390	13.7
(3) Insecticides, (Cost to Farmers £ 000)	179.3	375.6	109.5
(4) Feeding Stuffs for Animals £'000 (all kinds, incl. farras) (1)	4,363.7	5,424.3	24.3

Source : Compiled by the Planning Bureau on the basis of data provided by the Statistics and Research Department.

Thus, the number of agricultural tractors increased by about 81 per cent, fertilizer use as reflected in fertilizer imports by 18.5

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(1) Green fodders.

per cent, use of insecticides was more than doubled and feeding stuffs for animals (including service animals, such as donkeys and mules) increased by more than 24 per cent.

But despite this progress there are still substantial margins for improvement. The shortage of labour during harvest months will inevitably entail an intensification in the pace of mechanization. Significant fertilizer use improvements are possible both with regard to quantity and type. Likewise, the careful and timely application of insecticides and pesticides could save an appreciable proportion of production from pests, insects and various other plant diseases. The same could be said for animal diseases. Veterinary facilities have expanded but there is still much scope for improvement. As to feeding-stuffs for animals, there is no problem of supply but a shift is possible towards domestically produced stuffs. Likewise, animal yields could be improved by giving to the animals the right quantity of fodder or feeding stuff with the right nutrient content.

2.9 Land Tenure and Land Fragmentation

There is no feudal ownership of land and the extreme inequalities in land ownership, found in certain other developing countries, are not a characteristic feature in Cyprus, but holdings are small, highly fragmented and dispersed. This pattern of landholding is a barrier to the introduction of mixed farming, is wasteful not only of land, but also of other more scarce resources (e.g. water) and in general does not permit a better use of resources at the farm level and greater efficiency of opearations in terms of returns to land, labour and capital. The 1960 Census indicated that there were close to 70,000 holdings in Cyprus covering 3.2 million donums included in the Census. The average size of the holding was approximately 47 donums; 41 per cent of the holdings were under 20 donums in size and 76 per cent of the production units were under 60 donums. Thus, three quarters of the production units in the country were below 60 donums in size and these units occupied 35 per cent of the area farmed. Only 10.6 per cent of the holdings were larger than 100 donums and these covered 43 per cent of the land area. The typical production unit is not only small but also not compact. There is considerable fragmentation of these holdings. Thus the average size unit of 47 donums would be divided into pieces of land each of which would, on an average, be less than 5 donums. However, the extent of fragmentation and scattering of plots is smaller in the bigger holdings. Land fragmentation varies from area to area and from crop to crop. In the dryfarmed areas of the plains the units are bigger ; in the mountain regions and the vine-growing areas they are smaller.

The consolidation of holdings is a long-term measure and although during the First Plan period this highly complicated problem was carefully studied by foreign and local experts and a Bill was drafted, it is realized that the measure may have to be introduced gradually. Firstly, because it involves a radical break with tradition ; and, secondly, because it may aggravate the problem of underemployment in the countryside and for this reason it should proceed *pari passu* with the creation of job opportunities in other sectors of the economy.

2.10 Marketing

The question of marketing will be examined in more detail in the Chapter on Trade but it may be convenient to refer here briefly to the marketing of agricultural products. The United Nations Economic Survey Mission(1) which went into this problem in 1961 noted that " marketing conditions are costly both to agricultural producers and to consumers. The Government should take an active interest in improving this situation as a matter of policy ". The problem appeared to be more urgent in the field of exports and it was here that during the period of the First Plan the Government tried to rationalize marketing arrangements. Thus, two Marketing Boards were set up to regulate and control the marketing and export of potatoes and carrots. At the same time, efforts were made to improve internal marketing systems and to maintain conditions of competition. More particularly, the marketing conditions in so far as dairy products, meat and olive oil are concerned were investigated and it is expected that improved marketing arrangements will be introduced during the Second Plan period.

A number of cooperatives were also established to undertake marketing and processing operations.

Other bodies entrusted with marketing functions for agricultural products (besides individual merchants) are : the Vine Products Commission (for raisins and raw grape alcohol(2), and the Grain Commission (for wheat and barley).

2.11 Prices, Insurance and Subsidization Policy

Agricultural prices, crop insurance and subsidies are interrelated. The objective of crop insurance is the stabilization of farmers incomes, but this can also be achieved by securing relatively stable prices. On the other hand, if a price is fixed above a level that could be sustained by the free interplay of market forces, then such a level has to be supported by subsidies.

2.11.1 Agricultural Prices

During the First Five-Year Plan, the Government endeavoured to ensure a satisfactory level of prices for farmers both for incentive and income support purposes. On the other hand domestic and external demand conditions were satisfactory with the result that the average price index of agricultural products, went up by 5.6 per cent between 1961 and 1966(¹). The major contribution to this increase seems to have come from vegetables, potatoes and other non-tree crops in the case of irrigated crops and from the products of trees in the case of dry-farmed crops.

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(1) U.N. " Cyprus—Suggestions for a Development Programme. "

(2) Zivania.

2.11.2 Crop Insurance

Government policy in this field has been to help farmers insure themselves from damage and risks beyond their control. However, it is not Government's policy to compensate farmers for losses which they may incur from plant diseases which can be prevented by precautionary action on their part. In pursuit of this policy, the Government has continued operating the Agricultural Provident Fund, which is on a voluntary basis and compensates participating farmers for damage caused to wheat by hail and rust, as well as to barley, vines and deciduous fruit trees by hail. The Fund is financed from shares bought by the farmers and from equivalent contributions by the Government. In addition, with effect from 1965, the Government set up a Drought Relief Fund for the purpose of offering assistance to cereal growers who are hit by drought. This Fund is financed partly by the Government and partly by small compulsory contributions fixed on the basis of the annual wheat and barley deliveries to the Grain Commission. Another form of insurance initiated during the period of the First Plan is the establishment of price stabilization funds in the case of carrots and potatoes. The Potato and Carrot Marketing Boards withhold a small proportion of the price they pay to member producers in good years so that they may be able to offset losses in years when prices drop. In this way the adverse effects of short-term fluctuations in prices and incomes are minimized.

2.11.3 Subsidization Policy

A large proportion of the subsidies paid in agriculture (mainly for vine products and cereals) are regarded to be primarily part of an incomes policy for agriculture. The prices of cereals and vine products are fixed. Cereals are bought at higher prices (relative to world prices) and sold at lower prices by a Government monopoly, the Cyprus Grain Commission. In the case of vine products, the Government pays a subsidy which has the effect of raising producer prices. The subsidy thus is the means whereby consumers or users of wheat, barley and vine products purchase these commodities below the prices paid to farmers. However, prices and subsidies are not only important for income support purposes, but also as instruments for directing resource alloca-

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(¹) Estimated by the Planning Bureau on the basis of data provided by the Department of Agriculture.

tion and for enabling the attainment of the desired structural change and modernization in agriculture. During the First Plan Period new types of subsidies were introduced designed to enable the fulfilment of this latter objective, and to increase the productivity and efficiency of factors of production (e.g. subsidies for adopting modern water use techniques, subsidies in connection with the use of pesticides and fertilizers, subsidies to encourage the cultivation of early vegetables, beekeeping, etc.). An effort was also made to modify the old subsidy system—to bring about a gradual reduction in the subsidy-supported price of wheat, to increase the producer price of barley and reduce its sale price. The object of such a modification would be to discourage wheat cultivation in favour of barley cultivation which is more resistant to drought, has on the average higher per donum yields, and is an important feeding-stuff for the livestock industry. Some of the main subsidies paid in the agricultural sector during 1962-66 are shown in Table 6.

Main Agricultural Subsidies Paid during 1962–1966
(£ 000)

TABLE 6

	1962	1963	1964	1965	1966	Total 1962–66
Wheat and Barley ..	883.6	729.3	542.7	1,075.2	372.7	3,603.5
Vine Products	368.0	428.2	198.6	331.6	418.6	1,745.0
Agricultural Provident Fund	126.4	48.2	87.8	224.3	32.9	519.6
Soil Conservation Works	94.7	60.8	109.1	38.9	60.2	363.7
Water Use Improvement	—	—	—	0.9	7.5	8.4
Spraying Equipment ..	....	....	20.0	20.0	7.5	47.5
Total	1,472.7	1,266.5	958.2	1,690.9	899.4	6,287.7

Sources : Financial Reports, Ministry of Finance,
Department of Agriculture,
Planning Bureau.

The sum total of subsidies paid during this period for wheat and barley, vine-products, Agricultural Provident Fund, soil conservation works, water use improvement and spraying equipment amounted to £6.3 million, of which £5.3 million was given for vine-products and cereals alone. In addition, numerous other types of subsidies were channelled to the rural sector, e.g. agricultrual credit at a subsidized interest rate ; subsidized irrigation works (ranging from 25 to 75 per cent), subsidized village domestic water supplies, etc.

2.12 Agricultural Credit

The provision of credit facilities and in particular of medium and long-term loans for agricultural development, coupled with the relief of farmers from agricultural indebtedness, was one of the objectives of the First Plan. Government credit provided for agricultural development purposes during the period 1962-66 amounted to about £3 million. Of this about £1 million was channelled to farmers through the Cooperative Central Bank Ltd., about £44,000 was provided in connection with the Water Use Improvement Project, about £19,000 for fisheries development and £1.9 million for water development purposes. Some 39 per cent of the credit supplied through the Cooperative Central Bank was used for the purchase of agricultural machinery and implements, 18 per cent for land improvement and extensions, 22 per cent for the acquisition of land and water, 6 per cent for the erection of stables and pig and poultry units and 10 per cent for the purchase of animals.

The adequacy of the above amounts is difficult to judge, for the provision of these credits was accompanied by the implementation of major development projects which had the effect of boosting incomes and enhancing the saving potential and the credit-worthiness of farmers. The commercial banks, for example, increased their advances to agriculture from £7.4 million in 1963 to £9.7 million in 1966. On the other hand, the edifice of rural credit which was on the brink of collapse in 1960-61 because of the coincidence of poor harvests and mounting indebtedness was decisively strengthened by the enactment of legislation in 1961, which offered relief and protection to indebted farmers.

2.13 Rural Development

Reference to social developments in the rural areas will be made in other sections of this Plan, but it may be convenient to deal with this matter briefly here.

Historically, socially and administratively the village is the focal point of rural life in Cyprus and it is therefore essential to make the village as attractive an environment to live in as possible. As recently as 1960 housing standards in villages were pretty low. Thus, the 1960 Census showed that not only were 65 per cent of the rural houses over 20 years old, but also that 52 per cent had earthen roofs, 21 per cent had earthen floors, 31 per cent had no piped water supply, 22 per cent had no toilet and 90 per cent had no bath. Although no adequate data are available, all indications are that the above picture has in the meantime been substantially changed.

In 1961, 69 villages had no piped water supply and obtained their water from wells or nearby springs. By 1966, all villages except 4 (having a total population of about 1,000 persons) had piped water supply. Likewise, by 1966, about 48 per cent of all villages (or 67 per cent of the rural population) had acquired house-to-house distribution systems. Very few villages had electricity and telephone facilities in 1960. In fact only 96 villages had electricity supplies and 61 villages had telephone communications. By 1966, 220 additional villages were provided with electricity and 327 additional villages were connected to the country's telephone network. Major improvements were also observed in housing conditions. Some 13,000 new dwellings were erected since 1960 and repairs and alterations were carried out to existing buildings. It cannot be claimed, however, that in all villages housing conditions are good, nor that this problem received priority in the First Five-Year Plan.

Significant impetus was given to rural development by such other Government activities and projects as improvement and asphalting of village roads, assistance to rural municipalities for the execution of municipal projects, execution of antiflood works, resiting of villages, improvement and asphalting of village streets, erection of public buildings, etc. A total of £2.1 million was provided from Government development funds for the above purposes.

In summary, it may be said that substantial progress was recorded in the field of rural and community development during the First Five-Year Plan, but there is still much to be done if the village is to offer modern amenities and facilities to the rural population.

2.14 The Role of Government

The role of Government in promoting agricultural development is reflected in the proportion of development expenditure devoted to this sector during the Plan period (Table 7). Thus some £12.3 million, or 47 per cent of total Government development expenditure, were pumped into agricultural or related activities. This does not include about £2.1 million provided for rural and community development purposes, £5.8 million of subsidies provided from the Ordinary Budget, and a substantial sum for agricultural extension services also provided in the Ordinary Budget.

Development Expenditure in the Agricultural Sector, 1962–1966

TABLE 7

	£mln.
1 Agriculture	3.0
2. Animal Husbandry	0.4
3. Agricultural Research Institute ..	0.4
4. Veterinary Services	0.1
5. Water Use Improvement	0.2
6. Water Development	7.4
7. Forest Development	0.7
8. Fisheries Development	0.1
Total	12.3

Source : Planning Bureau.

In view of the priority given to water as a factor in agricultural development, water development rightly received the biggest share. Agriculture proper, which encompasses agriculture, animal husbandry and the water use improvement project, received the other major part.

3. Long-Term Objectives

The objectives and targets of agricultural development policy have been formulated in the light of the foregoing analysis, of the potentialities of the sector and of the progress recorded during the First Plan period.

The long-term objectives of agricultural development are to increase land and labour productivity and to create those competitive conditions in agriculture which will enable the disposal of agricultural production both locally and abroad. Only in this way will it be possible to ensure a sustained increase in incomes and a rising standard of living for the farming population.

More particularly, and in line with these general objectives, it will be the aim of the long-term policy of agricultural development—

(i) To encourage expanded output of those agricultural commodities—(*a*) which may be produced under competitive conditions and which may, therefore, enable the attainment of the export and import substitution targets ; (*b*) the production of which takes account of the existing and anticipated resources of the country ; and (*c*) which may be produced profitably under existing and anticipated institutional and organizational arrangements.

(ii) To increase per donum and per animal yields, improve quality, reduce unit costs of production and adapt production to expected demand conditions.

(iii) To increase the size and consolidate widely fragmented plots of land-holdings, so that the latter may become viable and efficient units of production.

(iv) To conserve and make the best possible use of the Island's water resources.

(v) To restructure and re-orient cropping patterns towards :
- —high value unit crops,
- —export crops or crops which replace imports,
- —crops which conserve natural resources, e.g. soil and water, and
- —crops which can improve the nutritional habits of the people, especially those in the lower income groups.

(vi) To step up animal production with a view to strengthening the balance of payments position and improving the nutritional standards of the people.

(vii) To encourage mixed farming (or the integration of livestock rearing with crop production).

(viii) To adopt a more rational subsidy and credit policy in furtherance of the above objectives, which will lay emphasis on increasing productivity rather than on maintaining or protecting inefficient and unprofitable activities or crops.

(ix) To improve further the functioning of the market mechanism and the marketing of agricultural products, both internally and abroad.

(x) To encourage farm mechanization on a rational and economic basis. (It is anticipated that the share of labour employed in agriculture will continue to decline and this renders imperative the mechanization of some agricultural activities. This is a particularly difficult problem in view of the prevailing small size of holdings, land fragmentation, underemployment in some regions and seasons, and shortage of labour in others).

4. Short-term Objectives : Specific Targets of the Second Plan

The specific targets and objectives of the Second Five-Year Plan in the agricultural sector are consistent both with the long-term objectives, outlined above, and with the other sectoral and intersectoral provisions of the Plan.

If the 7 per cent rate of growth in Gross Domestic Product is to be achieved, Agriculture will have to grow at a rate of about 8.5 per cent per year. In other words, value added in the agricultural sector should increase from about £27.9 million in 1966 to £42 million in 1971(1). For many countries this would appear to be a very ambitious target. However, extensive studies made by the Planning Bureau in cooperation with the Department of Agriculture suggest that the target is feasible and may well be surpassed if the necessary measures are taken and if farmers cooperate closely with the Government in the timely implementation of agricultural projects and policies(2). In terms of gross ouput, the target entails an increase in the value of production(3) from £39.1 million in 1966 to £58.6 million in 1971. This implies an annual rate of growth of 8.4 per cent which is higher than the one realized during the First Five-Year Plan.

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(1) At constant, 1966 prices.

(2) For planning purposes, 1971 has been assumed to be a normal year.

(3) Excluding the value of animal stock changes.

Table 8 shows the contribution of plant and animal production to the realisation of the target.

Plant and Animal Production, 1966 and 1971
(*At Constant*, 1966 *Prices*—£mln.)

TABLE 8

	1966	1971	Growth Index 1966–71 (1966=100)	Annual Rate of Change 1966–71
Plant Production	24.7	36.6	148.2	8.2
Animal Production (excl. Animal Stock Changes)	11.2	17.7	158.0	9.6
Other	3.2	4.3	134.4	6.1
Total	39.1	58.6	149.9	8.4

Source : Planning Bureau.

Plant Production Targets

Indicative targets in respect of broad categories of plant production are summarised in Table 9. It is expected to achieve an increase in overall plant production of about 48 per cent or 8.2 per cent per year. Irrigated crops will be the main contributors to growth with an output expansion of over 60 per cent—from about £13 million in 1966 to about £21 million in 1971. Their percentage share in total plant production will rise from around 52 per cent in 1966 to 57 per cent in 1971. The output of field and other non-tree irrigated crops should increase by about 30 per cent and that of irrigated trees (especially citrus) will more than double.

Production by Broad Category of Crops, 1961, 1966 and 1971 (¹)
(*At Constant*, 1966 *Producer Prices*)

TABLE 9

	Value of Output (£mln.)			Percentage Change	
	1961	1966	1971	1961–66	1966–71
A. Irrigated Crops	7.8	12.7	20.8	62.8	63.8
1. Field and Other Non-Tree Crops	4.6	8.1	10.5	76.1	29.6
2. Tree Crops (Irrigated) ..	3.2	4.6	10.3	43.8	123.9
B. Dry-farmed Crops	11.7	11.8	15.6	0.9	32.2
1. Field and Other Non-Tree Crops	5.0	5.7	7.7	14.0	35.1
2. Trees and Vines	6.7	6.1	7.9	—9.0	29.5
Total All Crops (A+B) (²)	19.5	24.5	36.4	25.6	48.6

Source : Compiled by the Planning Bureau on the basis of data provided by the Department of Agriculture.

(¹) More details concerning these targets are given later when the means whereby they may be achieved are described.

(²) Does not include various green salad products and firewood estimated to be £0.1—£0.2 million.

Production of dry-farmed crops will also be stepped up. A 35 per cent increase is feasible and this will be realized through yield improvements and a reduction of fallow land. But the percentage share of dry-farmed production in total plant output is expected to drop from 48 per cent in 1966 to around 43 per cent in 1971.

Animal Production Targets

Increased emphasis will continue to be placed on the promotion of animal husbandry. It is estimated that the value of animal production will increase from about £11.2 million in 1966 to about £17.7 million in 1971—a 58 per cent increase. The targets by type of animal product are given in Table 10. (As in the case of plant production, these targets must be regarded as indicative of the direction and magnitude of change and should not be considered as unalterable commitments).

Meat and Dairy Products and Other Animal Production, 1966 and 1971
(£mln.)

TABLE 10

	1966	1971	Percentage Increase 1966–71
Meat	6.8	11.2	64.7
Milk	2.6	4.0	53.8
Eggs	1.0	1.4	40.0
Other (including Hides, Hair and Wool, Animal Manure (Dry) and Honey)	0.8	1.1	37.5
Total	11.2	17.7	58.0

Source : Planning Bureau.

Other Agricultural Production Targets

Other agricultural production consists of the output of forests, fishing, hunting and ancillary activities. The total output of all these activities amounted in 1966 to about £3.3 million or 8.4 per cent of all agricultural production. It should increase to around £4.3 million in 1971 but its relative share to total output will drop to about 7 per cent. Details of the targets are summarised in Table 11 below.

Other Agricultural Production, 1966 and 1971
(£mln.)

TABLE 11

	1966	1971
Forestry	0.2	0.4
Fishing	0.3	0.5
Hunting	0.4	0.4
Ancillary Activities	2.4	3.0
Total	3.3	4.3

Source : Planning Bureau.

The assumptions underlying the foregoing targets will become clearer in subsequent paragraphs, in which the conditions and action necessary to achieve the targets are discussed.

5. Domestic Demand for and Exports of Plant Production—Agricultural Export Targets

In the formulation of the agricultural plan and in the establishment of the targets indicated earlier on account has been taken of the expected development of demand conditions both in the domestic and external markets.

(*a*) Domestic Demand

Domestic demand for plant products emanates from four sources: final consumption by the population, uses for seeds and seedlings, feeding-stuffs for animals and raw materials for the local industry. Some increase in the local consumption of fruits and other plant products is expected mainly as a result of population and income growth. No significant shifts in tastes and preferences are, however, anticipated. In the case of feeding-stuffs, the demand estimate was made having regard to the projected number of animals and on the assumption of an increasing share in the use of locally produced stuffs. Seed requirements were based on the projected area under cultivation. Demand by local industry was forecast on the basis of detailed studies carried out concerning individual industries.

(*b*) Exports

The difference between internal consumption and production is the exportable surplus. Table 12 summarises the export forecast for all agricultural products (whether exported in raw material state or after processing). A high proportion of the total agricultural exports are sold in their unprocessed state. This situation is expected to continue for the next few years because of the comparative advantage which the Island has in fresh fruit and some other staple food items. Over 96 per cent of the total agricultural exports are of plant origin and the rest of animal origin.

TABLE 12

Agricultural Exports, 1961, 1966 and 1971
(£mln.)

	1961	1966	1971
1. Plant Origin Exports	6.7	13.9	27.0
1.1 **Raw Materials**	4.6	10.0	21.4
1.2 **Processed**	2.1	3.9	5.6
2. Animal Origin Exports	0.4	0.5	0.9
2.1 **Raw Materials**	0.1	0.1	0.1
2.2 **Processed**	0.3	0.4	0.8
3. Total Agricultural Exports	7.1	14.4	27.9
3.1 **Raw Materials**	4.7	10.1	21.5
3.2 **Processed**	2.4	4.3	6.4

Source: Planning Bureau.

Thus, agricultural exports will practically double ; the projection is that they will grow by more than 14 per cent per year during 1967-1971, as they did during the previous five-year period.

The achievement of these targets will depend on the performance of a few key commodities :

Citrus : The value of exports of citrus and citrus juice and segments grew from £2.3 million in 1961 to £4.2 million in 1966. Available information about existing young plantations suggests that production will be such as to permit the value of exports to more than double by the end of 1971.

Potatoes : This is the second most important item. The value of exports grew from £1.3 million in 1961 to £3.4 million in 1966. The projection for 1971 is £5.0 million.

Grapes and other vine products : Exports of fresh grapes, raisins, wines and spirits and grape must increased by a 100 per cent during 1961-1966. Part of this substantial expansion in exports was made possible by the availability of stocks—raw grape alchohol, raisins and wines. During the Second Plan period it is estimated that they will increase from £3.2 million in 1966 to £4.1 million in 1971.

Carobs will continue to play an important role in export earnings. The export value of whole or kibbled carobs and carob products is expected to increase from £0.9 million in 1966 to £1.4 million in 1971.

Carrots : The export value of carrots, which started with good prospects and expanded from £0.2 million in 1961 to £0.6 million in 1966, is likely to remain more or less static partly because of market conditions, but also because land under carrots is gradually being cultivated with more remunerative crops such as citrus and potatoes.

Tobacco : The local cigarette industry utilizes only small quantities of Cyprus tobacco. The bulk of the production is exported, but because of its relatively low grade there has been a tendency for large undisposed stocks to accumulate in the hands of the Tobacco Co-operative Organization (SOK). With improvements in varieties and in methods of handling and grading, it is hoped that demand conditions will be such as to enable an increase in foreign exchange earnings from tobacco exports from £0.2 million in 1966 to £0.5 million in 1971.

Early vegetables : It is proposed to give increased attention to the promotion of early vegetables. This category includes special varieties of such crops as melons, peppers, aubergines, asparagus, etc. which, if placed on the market (especially in foreign markets, such as London) at the right time can fetch very high prices. It has been suggested that exports of items in this group could add as much as £0.8 million by 1971, if appropriate marketing and transportation arrangements are satisfactorily worked out.

Miscellaneous other plant products, earning £0.5 million in 1961 and £1.4 million in 1966, could bring in some £2.7 million in 1971.

6. Domestic Demand for and Exports of Animal Products

(*a*) Domestic Demand

The bulk of animal production is consumed locally. The only exceptions are hides, skins, wool and hair which are mostly exported. Small quantities of locally produced cheese and curd are also disposed of abroad.

The question now is whether the internal market for animal products will grow to an extent which will permit the absorption of the anticipated production. To answer this question a brief assessment of the demand conditions affecting the major categories of animal products is necessary.

Meat : Consumption of meat (both imported and locally produced) grew by 45 per cent between 1961 and 1966 (from £5.8 million to £8.4 million). Locally produced meat comprised about 70 per cent of total consumption in 1961 and 80 per cent in 1966—a shift which speaks eloquently of the effort to promote domestic production and reduce imports. Per capita consumption of meat of all types increased by about 39 per cent as compared to a 24 per cent increase in real per capita Gross National Product. The implication is that as per capita incomes increased by 1 per cent, consumption of meat increased by 1.6 per cent. As incomes rise beyond a certain point, however, the tendency is to spend proportionately less on food and meat. It is assumed that the above relationship between changes in per capita real income and meat consumption will be reduced from 1.6 per cent to 1.5 per cent during 1967-71. In other words, total meat consumption in 1971 is anticipated to rise to £12.9(¹) million as against £8.4 million in 1966. It is estimated that about £11.2(¹) million of this could be produced locally.

Milk : Most of the additional demand for milk during 1962-1966 was met from local production. In fact locally produced milk increased by about 67 per cent and imported milk(²) by about 7 per cent. This trend is expected to continue during 1967-71.

Present per capita consumption of milk—when both imported(³) and locally produced milk, whether in liquid or tinned form, are taken into account—amounts to about 40 okes per person

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(¹) At local producer prices of 1966.

(²) In terms of fresh milk equivalent.

(³) Imported tinned or dried converted into fresh equivalent.

per year. This is on the low side. In Israel it is over 60 okes and in Britain over 100 okes. And comparison with other countries is still more adverse when one bears in mind that only 19 out of the 40 okes per capita consist of fresh liquid milk. It has been estimated that with the rise in incomes consumption of milk may grow to around 50 okes per head by 1971. Part of this will be satisfied from imports but the bulk is anticipated to be met from local production. The targets set are not easy to achieve and will necessitate systematic and concerted efforts on the part of all concerned.

Eggs : Because of the rapid expansion of the poultry industry, Cyprus is now self sufficient in eggs. Per capita consumption increased by 32 per cent between 1961 and 1966—from 113 to 149 eggs. The estimate for 1971 is that per capita egg consumption will increase to 187, i.e. by 25.5 per cent over 1966. This is a feasible target considering that real per capita Gross National Product is forecast to increase by about 30 per cent. The amount of eggs to be produced is expected to rise from 7,500 to 10,000 thousand dozen.

Other Animal Products : The targets for the remaining animal products—hides, skins, wool, hair and manure—are a direct result of the animal population targets.

(*b*) Exports

The export sector comprises a very small proportion of the market for animal products (less than 4 per cent in 1966). As table 13 shows, the picture is not anticipated to be significantly different in 1971.

Exports of Animal Origin Products, 1961, 1966 and 1971

TABLE 13

(£ 000)

	1961	1966	1971
(1) Halloumi, Kephalotyri and Other Cheeses	105	129	203
(2) Hides and Skins, Wool and Hair ..	335	377	556
(3) Other	23	52	95
Total	463	558	854

Source : Planning Bureau.

The target for halloumi, kephalotyri and other cheeses is a conservative one and is based on the assumption that the bulk of the increase in milk production will be consumed in liquid form.

7. Means for Attaining the Plan Targets in Agriculture

7.1 Investment Requirements

Fixed investment in agriculture consists of soil improvement and conservation works, irrigation works, machinery and implements, animal stables, etc., i.e. expenditure which increases the

the productive capacity of the sector. It has been estimated that the target of £42 million value added by Agriculture will entail an increase in annual fixed investment from approximately £3.5 million in 1966 to £5.8 million in 1971. The total fixed investment required will be around £24 million as compared with £14.4 million during the First Five-Year Plan. About 35 per cent of this will be the Government share. But over and above fixed investment, Government intends to spend another £10.4 million from the Development Budget for agricultural development purposes.

7.2 Labour Requirements

Labour as used in this context includes not only hired labour but also self-employed farmers and members of their families within working ages. It has been pointed out in previous sections that the effective labour force in Agriculture has been declining and that this trend is likely to continue during 1967–71. The labour force in 1966 was estimated to be 96,800 persons, although an appreciable proportion of this received supplementary employment from other sectors. In view of the steep rise in agricultural output, labour requirements are likely to increase beyond 96,800 despite the existence of seasonal and regional underemployment. It has been estimated that even if underemployment is pushed down to a minimum corresponding to 8,000 persons in 1971, at peak demand periods—August to November—there will be a shortage of hands even if it is assumed that it will be possible to keep the agricultural labour force at around 97,000. Therefore, consideration will have to be given to an intensification of the pace of mechanization. In particular, attention need be focussed on the mechanization of potato, grape, carrot, olives and citrus harvesting and cultivation, which are largely responsible for the seasonal and regional labour shortages.

7.3 Agricultural Research, Extension and Education

It would be a mistake to consider only the quantitative labour requirements of agriculture. Indeed much of the progress in agriculture comes from new ideas, new methods of cultivation, new forms of organization and farm management. The adoption of such ideas and methods, as well as the recognition and implementation of new agricultural practices, necessitate an enlightened, educated and progressive farm population on the one hand and, on the other hand, availability of the basic facilities and institutions for channelling to farmers the necessary technical know-how, modern techniques and the latest developments in agricultural science and technology.

The need for imparting the necessary know-how and managerial skill to the farming population is of crucial importance at this stage of the development of agriculture. Although, as has already been pointed out, there has during recent years been an upsurge in the use of capital inputs and other arbiters of "modern agriculture", the rate of improvement of resource management has lagged behind. If overall productivity is to be increased at a faster rate than hitherto, then there has to be an improvement of management at the farm level. This is all the more necessary as the present need is to intensify the use of the two scarce factors, land and water—a task which requires greater skills at the farm level than that of increasing production through expanding the supply of water and capital. This stresses the need for farmer education, agricultural extension and agricultural research.

7.3.1 General Education

Good farmers require a good general educational background. According to the 1965–66 Survey on Educational Statistics(¹) out of about 71,500 elementary school children in Greek Schools(²) 49,000 were in the villages and 22,500 in the towns. Out of 34 Greek secondary schools 15 were located in rural areas, accounting for 30 per cent of the teachers and 27 per cent of the pupils.

The only schools available in Cyprus with more emphasis on agricultural education are the Agricultural Gymnasium of Morphou and the newly established Centre for Agricultural Vocational Training also located at Morphou. Higher education and scientific training in agriculture is obtained abroad. The only exception is the Forestry College at Prodromos, which offers two year post-secondary training in forestry and whose standard and reputation is such that it attracts foreign students.

7.3.2 Extension Services

The Agricultural Extension Service plays a decisive role as Government's "communications" system with the farming population. On the one hand, it keeps farmers informed of new methods of farming, and brings modern farming techniques and advice and the results of research to the doorstep of the farmer. On the other hand, it provides a feed-back of information on problems and responses of farmers to Government measures and policies.

The necessity for having a strong extension service is dictated by the need to increase productivity through educating producers to use improved methods of cultivation. A strong research institute and a weak extension service represent a poor balance in the use of manpower. Furthermore, present levels of technology lag behind attainable levels even without research so that further farmer education, based on already accumulated knowledge, can raise yields substantially.

(¹) Department of Statistics and Research.

(²) Returns from Turkish schools were not obtained because of the anomalous political situation.

The extension service, as the principal teaching and training arm of the Ministry of Agriculture, is one of the key services —if not the key service—in raising productivity through farmer education and this in turn is an essential element in the proposed strategy of development. This service should be the basic teaching service for all Departments in the Ministry (other than Forestry). Backed by a group of specialists the service should transmit information and advice in crop husbandry, water use, pest control and animal husbandry.

The extension service should not be an administrative, nor a policing service. Extension personnel must be teachers and advisors ; they have to rely on their ability to transmit information of value to producers ; they have to rely on their power of persuasion and the merit of their advice to get farmers to accept their advice. This first requirement implies that they must be trained in the philosophy of extension ; the second is that they should be well informed either in their own right, or by virtue of being backed by well informed specialists in the Ministry ; the third requirement implies that they must have the time to do their work and not be tied down by administrative routine.

During the Second Plan period the policy, which was started and intensified during the First Plan period, of improving the quality of the service and extending its coverage will be contined. Quality will be improved by hiring university graduates to replace retiring non-graduates ; coverage will be extended by expanding the service.

7.3.3 Agricultural Research

Prior to 1962 there was no organized research programme for agriculture. Whatever research was carried out was done on an ad hoc basis by the Departments of Agriculture and Animal Husbandry with poor facilities. To fill this gap the Government established the Agricultural Research Institute with assistance from the U.N. Special Fund. The central buildings of the Institute, which include fully equipped laboratories, were completed in 1964. Research farms attached to the Institute were established at Athalassa, Morphou, Xylotymbou, Galata, Trikoukkia, Saittas and Paphos. Additional land was rented, on a long-term basis, at Prastio (Messaoria) and this land is currently being used to maintain a cereal experimental station. The establishment and development of these experimental farms, which to a large extent cover most of the agroclimatic regions of Cyprus, have enabled the Institute to initiate a wide programme of investigations under the different agroclimatic conditions present in Cyprus.

Parallel with the above work the recruitment of personnel proceeded satisfactorily and by the end of 1966 the Institute had on its staff a total of 47 professional, technical and clerical employees. A scholarhip programme was also successfully implemented which was designed to meet the specialist needs of the Institute.

Although the period 1962–66 was essentially a preparatory or formative stage, research projects of potentially great economic importance to the economy were initiated.

During the period of the Second Plan the Institute in many respects will continue and expand the work which commenced under the First Plan. Emphasis will again be placed on high value export crops such as citrus, vines, potatoes, and other vegetables; on the agro-economic problems of cereals, fodder crops, fallow land and dryland fruit trees ; on the more rational utilization of water resources ; on the optimum fertilization of major crops ; on the control of pests and diseases ; and, in order to maintain and increase the competitiveness of export produce, on the best methods of handling, grading and packing of perishable products from the farm gate to the market ; finally, on the economics of agricultural production and the farming systems of the Island. On the other hand, and in line with the Plan targets, increased research emphasis will be placed on how and to what extent locally produced foodstuffs, such as barley, green fodders, lucerne etc., may be utilized efficiently in animal production and in increasing per capita animal yields of meat and milk.

During the Second Plan, the Agricultural Research Institute will be financed entirely from Government funds. Development expenditures on agricultural research are estimated to be almost twice those incurred during the period of the First Plan.

7.4 The Factor Land—Extensive and Intensive Cultivation—Related Projects and Policies

It was concluded under paragraph 2.6 that the process of agricultural development in Cyprus should lay more emphasis on intensive rather than extensive methods of cultivation. The possibilities for extensive cultivation will first be examined and specific projects designed to bring more land under cultivation will be discussed. Consideration will then be given to intensive methods of cultivation and to projects for increasing productivity.

7.4.1 Land Use

The plant production targets in Table 9 will be achieved in two ways : Through an increase in cultivated area and through an improvement in land yields. Table 14 shows the change in donumage under various crops. Thus, whereas overall cultivated area is planned to expand by 10.6 per cent, production will increase by 48.2 per cent, which implies that per donum yields will contribute 37.6 per cent of the production increase.

It will be observed from Table 14 that the land use pattern of 1966 will not undergo radical changes, although closer examination of smaller categories or individual crops reveals important structural shifts.

The area under irrigated crops might possibly increase by about 32,000 donums, as against an increase of 54,000 donums recorded during the First Five-Year Plan. This relatively smaller increase will be primarily the result of water shortage and the application of water control measures. The greatest part of the additional irrigation will come about from the proper development and utilization of water stored in dams constructed during 1961–66.

On the other hand, a large expansion in dry land (rainfed) areas is envisaged. Some 225,000 extra donums are expected to be put under cultivation as against 46,000 during 1962–66. This additional land will be gained through the application of a fallow-land utilization project, the recovery of land suffering from soil erosion, through various land development and soil conservation projects and the utilization of "hali" and "kafkala" land.

TABLE 14

Land Use Structure, 1966 and 1971

	Area (In Thousand) Donums)		Percentage Shares in Total	
	1966	1971	1966	1971
A. Irrigated Crops	268	300	11.0	11.2
1. Field and Other Non-Tree Crops	136	147	5.6	5.5
2. Trees	132	153	5.4	5.7
B. Dryland or Rain-fed Crops	2,161	2,386	89.0	88.8
1. Field and Other Non-Tree Crops	1,376	1,529	56.6	56.9
2. Trees and Vines	785	857	32.4	31.9
C. Total Cultivated Area	2,429	2,686	100.0	100.0

Source : Compiled by the Planning Bureau on the basis of data provided by the Department of Agriculture.

7.4.2 Land Development Projects and Policies

(*a*) Hali and State Land

It has been estimated that Government owns land scattered in small or large blocks of a total area of about 600,000 donums. This is the so-called hali land. A special committee appointed to study the problem of state land utilization has reported that only a small proportion of this land is suitable for cultivation without substantial soil improvement work. The largest portion of the total hali land consists of big plots over 50 donums in size.

The smaller plots are scattered among private land holdings. As a result of the tolerant and lenient attitude of the Authorities, in most cases " usable " land has already been cultivated or encroached upon by villagers. The uncultivated or unencroached upon areas have remained so because of some physical obstacle impeding their utilization, e.g. poor or rocky soil, soil erosion, soil salinity or swampiness. In the light of the recommendations of the committee, the Government intends to proceed to a systematic development of this land. The fundamental principle of state land policy will be the optimum utilization of such land. Thus, the case of each individual plot or block of land will be treated on its own merits. Some plots for example are suitable for tourist development purposes, others are good for pastures, some are to be found in urban areas and may be used to enable the introduction of town planning and embellishment schemes etc. Another important purpose for which hali land may be used is to facilitate land consolidation.

(*b*) **Land Consolidation**

As already explained, land fragmentation in Cyprus is a problem whose solution, albeit long-term, will enable a more efficient use of mechanical and other means and will help raise the productivity of land. The answer to land fragmentation is land consolidation. A Land Consolidation Bill has already been prepared together with amendments to the Immovable Property and the Administration of Estates Laws. The purpose of these amendments is to prevent or reduce further fragmentation of agricultural land.

The Land Consolidation Bill, which is already before the House of Representatives, provides for the establishment of a Central Land Consolidation Authority which will be responsible for the central direction, organization and coordination of all land consolidation activities in the Island. It will have powers to hold and buy land and other property and sell or use such property for the purpose of land consolidation. It will be able to borrow money with the approval of the Council of Ministers and lend money to the local consolidation committees and individuals for the purposes set out in the Law. At the village level the bills provides for the establishment of Land Consolidation Associations and Land Consolidation Committees.

Under the Bill, consolidation will be effected in three ways :

—by unanimous agreement among a small number of farmers ;

—by participants' resolution where the majority of farmers in a village or area vote for it ; and

—by Government order when the two previous methods have failed. In this case consolidation is compulsory and is intended to be applied only in special cases where

Government proposes to spend large sums of money, as in the case of the construction of large dams or in the case of the execution of extensive soil reclamation and conservation works.

(*c*) Fallow Land Utilization

The greatest opportunity for expanding the cultivated acreage is in the dryland areas where, it is estimated, over a million donums of scarce land is left fallow in any one year because of the existing system of crop rotation. This "idle land" is a drag on the economy, yielding as it does a negligible income to producers and to the country. If this land is taken into account in estimating yields then the yields of winter crops are much lower than is usually accepted, and so the yield per acre of dryland is low. In order to use this land productively there has to be a structural change in agriculture. There has to be a change in the system of crop rotation so as to introduce a fodder crop ; at the same time there has to be an integration of livestock rearing with crop production. Any such change will have to be part of a long-term programme but the fallow land utilization and the "mixed farming" projects outlined later on are intended to initiate such a programme. These projects place great emphasis on educating selected farmers in the techniques of integrated farming and providing them with the means to accomplish this radical departure from the traditional methods of farming. The end result of these projects will be to lay the groundwork for a more intensive use of land.

Thus, if cereals are grown in rotation with fodder legumes and appropriate fertilization measures are taken, the practice of leaving land fallow may be dispensed with. A project on these lines will be implemented during the Plan period. Its target is to put to productive use some 150,000–200,000 donums of fallow land during 1967–71.

The fundamental objective of the project is not merely to eliminate fallow land but in conjunction with other projects to convert the cereal grower into a farmer who combines the cultivation of cereals with the keeping of animals. Government total allocation for this project will be in the region of £200,000. Subsidies and credits will be provided by Government as incentives for this purpose.

(*d*) "Kafkalla" and Other Land Development Projects

In Cyprus there are about 330,000 donums of private and public kafkalla land (poor, shallow, rocky soils) which is not used for agriculture except for rough grazing on the scanty vegetation which grows on this land. By blasting the kafkalla rock and planting carob, olive and other trees it is possible to put such land to production. The planting of trees on the kafkalla is combined with the development of the land for grazing purposes through appropriate fertilization and reseeding, thereby increasing the economic returns on this type of land.

Experimental work already carried out has given encouraging results and thus during the Second Five-Year Plan work on these development projects, which aim at increasing the productivity of these lands, will continue. In the case of private kafkalla lands a subsidy of about 30 per cent of the total cost of land preparation and tree planting, fertilization and reseeding is paid.

(*e*) Dry-farming and Mixed Farming Projects

Dry-farmed or rainfed areas comprise about 89 per cent of cultivated area, but they contribute only 48 per cent to total plant production. This proves that land and labour productivity in these areas is very low. The following are some of the causes of this low productivity : Soil erosion and unsatisfactory soil preservation, inadequate or improper fertilization, lack of water, land fragmentation prohibiting efficient use of mechanical means, cultivation of low-yielding crops and separation of crop cultivation from animal breeding.

In line with the policy of optimizing land utilization so that land productivity and farmers' incomes may be increased, the Government has prepared a number of dry-farming or mixed farming projects some of which have already been launched. The following are some of these projects :—

(i) *Mixed Farming Project* (*undertaken in cooperation with the World Food Programme*). This project was started in 1967 in cooperation with the World Food Programme of the U.N. Its basic objective is to promote mixed farming in an agro-climatic zone stretching between Cape Kormakiti and Cape Andreas in the Northern part of Cyprus, where rainfall and land yields are low. The project will be of a five-year duration and is expected to affect directly over 360 farmers.

More specifically the aims of the project are : *Firstly*, to rehabilitate about 3,300 donums of grazing land on about 360 farms through scientifically sound farming practices —fertilizer application, seeding with legumes and grasses and deferred grazing. *Secondly*, to utilize about 11½ thousand donums of fallow land by introducing fodder crops into the traditional grain-fallow cycle. *Thirdly*, to improve the feeding rations of animals (mostly sheep and goats) and increase animal yields, through the provision of balanced feeding-stuff rations. *Fourthly*, to substitute forage crops for cereal crops grown on some of the land lying within the project areas.

Under the relevant agreement concluded between the Government and the World Food Programme, the latter will make available 10,000 metric tons of maize over the five-year period of the project; the maize will be utilized in connection with the project, as follows :—

75 per cent of this quantity will be issued free of charge to the participating farmers for animal feeding after mixing it with compound fodder mixtures to produce a balanced ration ; and

25 per cent of the maize will be sold on the open market and the proceeds therefrom, after being supplemented by Government, will be placed in a special fund out of which loans will be issued to the participating farmers to enable them to establish livestock sheds and water points and to purchase additional livestock seeds, fertilizers and implements.

Short-term loans are also granted by the Government for the purchase of the additional feeding-stuffs required to produce balanced rations for the animals. It is expected that implementation of this project will result in an increase of the incomes of farmers participating in it and will also have a general demonstrational effect.

(ii) *Soil Conservation and Tree Planting Project* (*undertaken in cooperation with the World Food Programme*). This is a major project approved recently by the World Food Programme. Its implementation will be put into effect as from January 1st, 1968.

Under this project the World Food Programme will provide various food commodities—flour, bulgar wheat, edible oil, tinned meat, sugar, powder milk, meat, rice etc.—worth over £1 million pounds, which will be distributed free of charge to participating farmers. The farmers will contribute their labour and relevant materials required for the purpose of carrying out soil conservation and improvement works on their land so that not only will per donum yields of existing cultivations increase, but the ground will be prepared for the introduction of new crops, and the planting of high-yielding trees such as apple, pear, cherry trees, etc. The project will be implemented mainly in the mountainous and less-developed areas of Cyprus.

The Government will assist in the project by granting subsidies and credits for soil conservation works—land levelling, terracing etc.—and by providing farmers with transplants free of charge or at subsidized prices ; technical assistance and advice will also be provided.

The total Government contribution to the project (capital and running costs, subsidies and loans) will exceed £1 million during the life period of the project.

This project will run for five years and is expected to have a very favourable impact on production. It will cover mainly the mountain and hilly areas of the Island, which have low incomes and will offer farmers incentives to carry out improvements to their land during periods, when they are normally underemployed.

(iii) *The Dry Farming Project.* The basic objective of this project is to promote the best possible use of farmers' resources under the peculiar agroclimatic conditions prevailing in the Island's dryland areas, by utilizing land for the production of forage crops which will be used for feeding animals.

To achieve this objective action along the following lines will be taken. Firstly, an entire village area will be surveyed to find out the land use structure, land ownership patterns, land capability, the demographic characteristics of the area and to collect other relevant data, which will enable the preparation of economically sound projects. The second step is to design a series of measures that can be taken in a particular area in the light of the data collected during the survey. These will include land consolidation, where necessary, soil conservation works preferably to be carried out on a communal basis through the setting up of Soil Conservation Divisions ; planting of trees such as carobs, olives and almonds ; assistance for pasture development and fodder crop production ; loan facilities to participating farmers for the purchase of livestock, construction of sheds, etc. It is expected that the proposed establishment of a special " Livestock Breeding Unit " (see section on Animal Husbandry) will meet the increased demand for improved animal stock which will result from the implementation of these schemes.

It would be difficult to attempt to quantify the benefits which will accrue from these projects ; it is however expected that the re-orientation and restructuring of the agricultural pattern in the large dryland areas will mark a turning point in the Island's agricultural development. The traditional and relatively static farming methods and practices will give way to improved and economically sound practices from which not only the farmers but also the general economy of the Island will benefit.

(iv) *Carob, Olive and Almond Tree Planting Projects.* Part and parcel with the above-mentioned projects are the carob, olive and almond tree planting projects. The carob tree planting project was initiated in 1964. Its basic aim is to provide farmers with incentives to plant carob trees in areas below the contour line of 2,500 feet, which are particularly suited to this crop and which offer no better alternative use. Government's role in this project consists in the production of the requisite seedlings and their sale to farmers at subsidized prices. Subsidies are also paid to farmers for soil conservation and land levelling and other improvement works.

The olive and almond projects are designed to encourage the planting of olive and almond trees and are operated along similar lines as the Carob Planting Project.

(v) *Carob and Olive Fertilization Programme.* Experiments carried out over a number of years have established that the yields of carob and olive trees can increase substantially if Sulphate of Ammonia is applied to these trees. In order to encourage the farmers concerned to use this type of fertilizer and increase the productivity of their trees, a subsidisation scheme has been introduced. The subsidy payable under the scheme amounts to about 35 per cent of the cost of the amount of fertilizer which should be used in connection with each tree. The programme will have mainly a demonstrational effect bringing home to the farmers the benefits which they stand to gain through proper fertilization.

(vi) *Dryland Pasture Promotion and Hay-Making.* This is a programme which might be considered under animal husbandry. It is mentioned under " land development " as it entails the utilization of hitherto idle land, such as hali and communal land, for the cultivation of fodder crops.

Experimental work carried out before and during the First Five-Year Plan has shown that the application of fertilizers to natural grass has a very beneficial effect on the growth of such grass. Already some 3,000 donums were covered in this way during 1962–66. It is proposed to continue the programme and improve it by reseeding these idle areas with wimmera rye-grass and subterranean clover. In the initial stages of the project, Government will offer subsidies for pasture improvement if the grazing areas comprise " communal grazing lands " known as merras. Once the improvements are brought about, the maintenance costs will be borne by the animal owners. As to hali land, the arrangements will depend upon the method of disposal of the land.

Closely akin to the development of pastures is hay-making. Hay-making, apart from straw, is practically unknown in Cyprus. It is proposed to launch a programme intended to demonstrate and encourage hay-making on a small scale through the use of small implements and on a large scale through the use of tractor-drawn machinery. Hay-making is complementary to pasture development and its adoption by the farming community will contribute towards the success of the mixed farming policy. Moreover, it will be an indispensable pre-requisite, if fodder is to be conserved and used later on in the year for animal feeding when demand for it is highest.

The foregoing are some of the major projects and measures which it is proposed to introduce or continue mainly in support of the programme of land development. More will be mentioned in subsequent paragraphs.

7.5 Increasing Productivity through Increased and Better Use of Inputs–Water

7.5.1 Productivity from Irrigated Areas

It has been pointed out in paragraph 2.6.3. that average land productivity from irrigated areas is 8½ times higher than that from dry-farmed areas and that as a result water becomes a pace-setter in the development of agriculture.

In order to enable an increase in the area of irrigated land and at the same time save from sea intrusion the flourishing citrus and other plantations of Morphou, Famagusta and Limassol, which may well take place through the over-pumping of the underground aquifers, efforts will be made to implement vigorously Government's policy both with regard to improving water use efficiency and controlling over-extraction.

7.5.2 The Water Use Improvement Project

This project has already received ample publicity but its importance should be re-emphasised. Through the application of modern irrigation practices the project aims at (*a*) improving water use efficiency by 20–25 per cent, thereby saving substantial quantities of water; and (*b*) increasing per donum yields of irrigated crops by 5–10 per cent. The saving of scarce water resources and the increase in crop yields justify fully the expenditure incurred in connection with the project.

The project will be applied to critical water areas such as Morphou, Famagusta and Limassol and, within these regions, priority will be given to areas covered by existing citrus plantations. It will also be applied in the areas irrigated or to be irrigated from existing and new dams.

Government development expenditure on this project will be of the order of £1.9 million. Of this £1.7 million will be in the form of credits and subsidies for land levelling and piping and £0.2 million for administrative and other expenditure to be incurred in connection with the implementation of the project. At present, Government pays to participating farmers 15 per cent of the cost of the works in the form of grants and provides credit up to 85 per cent of project expenditure.

7.5.3 Saline Water Utilization Project

This is an extension of the Water Use Improvement Project to certain areas in the Mesaoria plain, where underground aquifers yield water which is too saline for the production of normal crops and vegetables but is suited to the production of saline-water tolerant crops, notably lucerne and fodder beets. Although some such production is already taking place, much more of this type of water remains unused due to a lack of knowledge of the principles underlying its successful use.

The saline water utilization project was started in 1965. Its objectives are to raise water use efficiency and crop yields by applying improved irrigation practices and techniques. During 1967–1971 an effort will be made to utilize such water and cover some 3,400 donums with lucerne and fodder beets offering the same incentives and means as are provided under the Water Use Improvement Project.

7.5.4 Water Control Measures

Water control measures have the same objective as the Water Use Improvement Project, i.e. the rational utilization of water resources and the prevention of over-pumping and over-extraction and consequential drying up of the aquifers. It is intended to instal water meters on all irrigation boreholes in the critical areas thereby enabling control and regulation of water extraction.

The measures relating to control of over-pumping are not exclusive of other measures intended to save the aquifers, e.g. recharge works, but they are considered to be the most effective means of ensuring that a balance between ground water extraction and replenishment is established.

7.6 Other Agricultural Inputs

The Plan targets of increasing yields by at least 36 per cent during 1967–1971 will entail an intensification of the rate at which more and imrpoved current inputs such as fertilizers, pesticides, seeds, feeding-stuffs and machines are applied. As already mentioned elsewhere, satisfactory progress was made in this direction during the First Plan period. The need now is to systematize and speed up the effort :—

7.6.1 Fertilizer Use Improvement Programme

This programme was in fact initiated in 1966. Its broad goal is to increase the fertilization efficiency by demonstrating to farmers the proper fertilizer practices. The means used are two-fold : on the one hand, fertilization demonstrations are carried out, on the other hand, soil and leaf analyses are done for each plantation and specific recommendations are made to farmers about the correct types and quantities of fertilizers which should be used in each particular case. The cost of demonstrations etc. is borne by the Government. But the cost of soil and leaf analysis largely devolves on the farmers. This programme is additional to the carob and olive fertilization project and the fertilization of pasture lands already described. The benefits from the programme are :—(*a*) a significant increase in land yields, and (*b*) a reduction in the cost of fertilization as a result of the application of the correct practices and the right type and amount of fertilizer.

The per donum quantity of fertilizer used increased during 1961–1966 by 14 per cent. It is anticipated that it will increase by 13 per cent during 1966–1971 and will entail an increase in fertilizer consumption from 94,690 tons in 1966 to over 120,000 tons in 1971.

7.6.2 Pesticide Use and Plant Protection

Although the use of insecticides and pesticides was doubled between 1961 and 1966 with highly beneficial results, still many diseases and pests threaten crops. A systematic programme of plant protection was launched in 1965. It started with priority diseases and crops but over time it is hoped to encompass some 53 perennial and annual crops on an area of 1.6 million donums. Preventive or curative action varies according to plant and disease. In some cases a disease may be fought by individual farmer action. In others, a collective effort is indispensable.

Some of the major pests or diseases are :

The Almond Wasp : Under existing legislation farmers have the responsibility of collecting and burning infested almonds, appricots and kaisha.

The Potato Tuber Moth, which according to an estimate destroys about £200,000 worth of potatoes annually. It will be combated through biologieal control involving the release of special parasites obtained already from the Commonwealth Institute of Biological Control. Some citrus pests can also be fought in the same way.

Citrus. Here the biggest menace is the Mediterranean fruit fly, which can be controlled by bait sprays and the rust mite which is controlled by acaricides.

Olives : Control of olive fly by bait sprays and airspraying and of the olive moth with insecticides.

Cereals. Control of weeds and also of cereal leaf miner.

Vineyards. Control of downy mildew, grape berry moth and powdery mildew.

Plant protection is promoted essentially through farmer education and through the technical advice rendered by the Extension Services of the Department of Agriculture. Subsidies are also paid to farmers for the purchase of sprayers and dusters. Moreover, as from 1966, the Department of Agriculture has acquired a small aeroplane for collective airspraying of major and compact plantations and crops. The aeroplane will be used, whenever possible, to control the olive fly, mediterranean fruit fly, late blight of potatoes, downy mildew of vines, sunn-pest and leaf miner of cereals, gypsy moth on forest and fruit trees.

During the Second Plan period, development expenditure of the order of £200,000 will be incurred on plant protection.

7.6.3 Mechanization

Table 15 indicates the rapid pace of agricultural mechanization in Cyprus in the post-Independence period. This pace, however, will have to be stepped up if labour shortages during peak harvest periods are to be avoided. There are of course obstacles to mechanization resulting from the extreme land fragmentation and the smallness of holdings ; the hilly topography of some plantations such as vines ; the absence or inadequacy of farm roads etc. The Government (*a*) will continue providing credit facilities to farmers through the Cooperative Central Bank to enable them to acquire the necessary agricultural machinery and implements ; (*b*) will promote land consolidation ; (*c*) will encourage the importation of special machinery suited to the difficult terrain of the hills and mountains ; (*d*) will encourage the mechanization of labour-intensive operations, such as the picking of potatoes, carrots, carobs, olives and citrus, so as to mitigate the problem of labour scarcity during peak seasons ; and (*e*) will consider the possibility of providing funds to encourage farmers to construct farm roads so as to facilitate the use of mechanized means of transport. This will result in cheaper and quicker movement of goods, labour and material inputs, will reduce costs and save labour.

7.6.4 Seed Improvement—Seed Production Farm and Centre

Seed of good quality and of the right variety and type plays a major role in producing high per donum yields.

Selection of certain types of pure and good quality seed for cereals and other crops has been carried out at the Government Farm at Morphou. But the space now available there is not enough and a new farm is to be set up on Government land near Ayia Irini Forest.

To meet the needs of proper seed selection, maintenance and certification, a new Seed Production Centre was started in 1964 on land near the Grain Commission stores in Nicosia. Sheds, stores, offices and a seed treatment plant have so far been set up. New seed cleaning machinery and other equipment will be added. Capital expenditure in machinery and buildings is estimated to cost £33,000 during 1967–68, in addition to £61,000 spent during 1964–66. In addition, seed production will entail costs of a recurrent nature which will amount to over £1 million during the same period.

TABLE 15

Imports of Agricultural Machinery, 1960–1966

	1961	1961	1962	1963	1964	1965	1966
Machinery for Cultivating and Preparing the Soil :							
Harrows	6	40	62	32	51	52	14
Ploughs-Animal Power ..	—	—	15	—	—	—	—
Mechanical Power	180	151	219	183	52	80	73
Other	117	155	503	840	390	808	1,441
Machinery for Harvesting, Threshing and Sorting :							
Harvesters	4	1	6	—	2	—	—
Threshers	—	—	1	1	1	—	—
Reapers & Binders (Combines)	—	—	—	—	—	5	—
Reapers & Threshers (Combines)	8	5	18	34	8	93	36
Mowers	24	24	50	14	30	20	51
Other	—	—	6	37	6	93	103
Tractors :							
Crawler(1)	10	33	24	7	6	2	2
Wheeled with pn. tyres ..	244	237	571	575	220	705	786
Wheeled with steel wheels	—	—	—	—	6	—	—
Irrigation Equipment :							
Hand pumps	279	315	510	259	349	147	119
Power pumps(2)	2,948	1,711	1,340	1,719	1,067	1,078	1,370

Source : Statistics and Research Department.

7.7 Policy Measures Pertaining to Particular Crops

The foregoing analysis was intended to highlight the major targets, policy measures and projects of the Agricultural Plan. Mention should also be made, however, of measures concerning certain crops of particular significance :

Cereals : In view of the emphasis placed on livestock production, Government policy with regard to cereals will be to encourage barley and other fodder crops. With regard to wheat, the policy will be to discourage soft wheat varieties in favour of hard (durum) wheat, which fetches a higher price in the international market and is also suitable for macaroni making.

Vines : The registration of vineyards is now complete. This will enable the Vine Products Commission to regulate the direction in which vine-growing should develop. A number of new varieties were imported and tested by the Department of Agriculture in an attempt to produce better quality wines. Research work in this field is also being carried out by the Agricultural Research Institute. The cultivation of table grapes will receive priority because they are developing into an important export crop. It is anticipated that the area under table grape varieties will expand from 16,000 donums in 1966 to about 21,000 in 1971 but that of common grapes will decline from 239,000 donums in 1966 to 236,000 in 1971. Improvements in the quality of raisin production will also be encouraged.

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(1) Not all tractors shown are used solely for agricultural purposes.
(2) Power pumps imported are in addition to pumps produced in Cyprus.

Tobacco : A Tobacco Improvement Project was started in 1965 and will continue through to 1970. Its object is to improve the quality of the tobacco leaf produced by improving the methods of production, curing and storage. Seed of suitable varieties is given free of charge to all growers and polythene sheets for the protection of the seed beds have been issued at a 50 per cent subsidy. Field demonstrations on production methods and curing are carried out in most tobacco growing villages of the Karpass area.

Carobs and Olives : The carob and tree planting projects have already been mentioned as well as the beneficial effects arising from fertilization.

Citrus : The distinctive place of citrus in Cyprus agricultural production has already been mentioned. Increased competitiveness will entail measures to keep costs of production as low as possible and to improve further the already high quality of citrus. Such improvements include adequate control and possible eradication of some of the main citrus pests and diseases, the introduction of improved varieties substantially free from virus diseases, the improvement in irrigation practices under the Water Use Project and better use of fertilizers including the minor elements.

Early Vegetables : In the discussion of exports it was pointed out that a new category of crops referred to as " early vegetables " has good prospects in the London and other European markets. Projects are already under way aiming at the encouragement of such vegetables. Selected seeds will be produced and sold to farmers at cost price. Subsidies up to 15 per cent of the cost of plastic covers, wires etc. will be provided. The granting of credit and other facilities is also being considered.

Deciduous Fruit Trees : Demand for fruit, such as apples and pears, is quite high and Government nurseries will be expanded to meet demand for transplants. Soil conservation subsidies and credits will be provided to farmers under the World Food Programme and other relevant projects.

Miscellaneous Other Crops

Other crops, the production of which at the moment is small and which will be encouraged, are bananas, flowers, asparagus, mushrooms and pistachio trees.

7.8 Marketing of Agricultural Products

Agricultural products face peculiar marketing problems mainly because of their perishable nature, but also because in many cases both demand and supply is relatively inelastic.

The measures taken to improve marketing arrangements during the First Five-Year Plan were briefly described in paragraph 2.10. As far as the external market is concerned, the forecast is that demand conditions will continue to be good especially following the devaluation of the Cyprus pound. But this does not mean that the effort to improve external marketing arrangements should be relaxed. Export promotion is one of the basic objectives of this Plan. And, in view of increasing competition, if existing markets are to be maintained and expanded and new markets are to be tapped, besides market research and publicity, it is necessary to improve quality standards, to adopt or maintain up-to-date methods of grading, packing and presentation, and to improve marketing arrangements in general. It is expected that the Export Advisory Council, which it is proposed to set up (see Chapter on Trade), will make a valuable contribution in this direction.

As far as internal marketing is concerned, as has already been mentioned, specific studies have been or are being carried out concerning the marketing of certain commodities which present particular problems (olive oil, milk, meat) and it is proposed during the Plan period to introduce improved marketing arrangements in so far as these commodities are concerned.

7.9 Subsidies and Price Support Policies ; Crop Insurance

The basic principles of policy adopted during the First Five-Year Plan with regard to subsidies and crop insurance will be continued during the Second Five-Year Plan. Thus, subsidies and price support measures will be used :—

(*a*) as an instrument for attaining the Plan targets of restructuring the economy and effecting desired improvements and productivity changes ; (*b*) to protect farmers from sudden or cyclical fluctuations in prices which do not reflect the long-term trend or normal market conditions. Such protection may be necessary if price fluctuations are so violent as to threaten to deprive farmers of the basic means with which to continue cultivations for which prospects in the long-run are good. The adverse effects of such fluctuations, however, can be minimized more successfully through price stabilization funds and improvements in marketing arrangements, rather than through price support and subsidy measures. For, if price support measures ultimately have the effect of maintaining prices at artificially high levels, they contribute to a misallocation of resources and prevent the production level of particular activities from being adjusted to normal market trends and conditions ; and (*c*) to raise the incomes of farmers to levels commensurate with the objectives of economic and social development. The aim of raising farmers' incomes will ultimately be attained through the adoption of measures which help to enhance the productive capacity of land and which are in accord with the longer-term objective of restructuring the economy. For this reason, the emphasis of the subsidy policy will gradually be shifted from price and income maintenance towards the provision of incentives for investment, for increasing inputs and for improvements which lower the cost of production or increase per donum yields.

With regard to crop insurance, Government policy will continue to be to encourage farmers to insure themselves against damage and risks beyond their control. For this purpose, Government will continue operating the Agricultural Provident Fund and the Drought Relief Fund, but the whole question of crop insurance will be reassessed in the light of a report to be submitted by an actuary.

7.10 Agricultural Credit

The realization of the Plan targets will necessitate the supply of low-cost credit to farmers and animal breeders. It is estimated that about £4.5 million of the £19.2 million allocated from Government development funds for the broad agricultural sector (inluding water) will take the form of credit. Most of the credit to be channelled into agriculture will be part of or associated with specific projects.

In the case of Government credit facilities to be offered through the Loan Commissioners or the Cooperative Central Bank the purposes for which loans will be issued will be tied to well-defined objectives serving the immediate or long-term goals of development planning.

Other agencies for the supply of agricultural credit will continue to be the Cooperative Central Bank, the Commercial Banks and the Cyprus Development Corporation.

7.11 Government Development Expenditure in Agriculture

It is clear from the foregoing analysis that the effort for accelerated agricultural development will be spear-headed by the Government. A list of expenditures to be financed from the Development Budget during the period 1967–71 is given in Table 16. These expenditures cover only the plant and crop part of agricultural development, agricultural research and water use improvement. The distribution of expenditure between various fields and projects reflects the priorities which are implicit in the Plan targets. It should be stressed, however, that the expenditures are tentative and, if necessary, they may be revised in the course of Plan implementation.

As to the level of the provisions, the target allocations are more than double the expenditure realized during the First Five-Year Plan ; and they do not include supporting expenditure and subsidies financed from the Ordinary Budget. With the Agricultural Services now better staffed and equipped, the proposed increase in activities should be feasible.

Development Expenditure for Agriculture, 1967–1971 (Including Agricultural Development, Agricultural Research and Water Use Improvement)

TABLE 16

	Allocation £ 000	Total £ 000
1. *Agricultural Development :*		
1.1 Land Use Improvement (including Land Consolidation, Soil Conservation, Land Reclamation and Drainage, Soil Surveys) ..	890	
1.2 Mixed Farming (including Pasture, Fodder and Forage Development, Hay Making, Fallow Utilization, Dry Farming, W.F.P. Mixed Farming Project)	730	
1.3 Tree Planting and Improvement Projects (including Vines, Almonds, Carobs, Olives, Pistachios, Deciduous Fruit Trees, Citrus, Bananas)	200	
1.4 Vegetables and Crops (including Encouragement of Vegetables and Flowers, Tobacco Growing, Seed Production, etc)	1,180	
1.5 Plant Protection	200	
1.6 Government Farms, Stations, Nurseries, etc. (including Paphos Chiftliks)	250	
1.7 Special Minor Projects (including Bee-keeping, Fertilizer Use Improvement, Statistics, Demonstrations, etc.)	60	
1.8 Agricultural Credit and Contingencies ..	1,000	
1.9 Other (including Administration, Technical Assistance to Farmers, Machinery, etc.) ..	540	5,050
2. *Agricultural Research*:		
2.1 Administration, Experiments and Investigations, Improvement and Maintenance of Farms, Stations and Nurseries and Other Miscellaneous Expenditure	750	750
3. *Water Use Improvement :*		
3.1 Water Use Improvement (including Administration, Water Control)	1,900	1,900
Total		7,700

B. ANIMAL HUSBANDRY

The progress recorded during the First Plan and the outstanding problems in animal production were discussed briefly in previous paragraphs. The Second Plan projections were set out in Table 10. In the following paragraphs more will be said about policies, measures and projects designed to accelerate the development of animal husbandry.

1. Supply and Demand Prospects

The main factors determining the development of animal husbandry in Cyprus are internal demand and the extent to which imported meat, milk and dairy products can be replaced by domestic production.

The targets of meat and milk production indicate the directions along which animal husbandry is likely to develop.

In view of the recent performance of the private enterprise, it might be argued that the private sector has acquired a momentum which would ensure further progress without Government assistance. However, as it will be explained below, this stage has not yet been reached and Government policies and projects will be of decisive importance in the attainment of the Plan targets.

2. General Policy Measures

One of the basic policies is to promote the development of animal husbandry through the integration of livestock rearing with crop production. In this connection reference is invited to the Dry Farming Project, the Mixed Farming Project and the Fallow Land Utilization Project outlined in previous paragraphs.

Another policy measure is to increase yields (meat and/or milk yields) through the importation of improved breeds, through appropriate selection, through improved feeding and management practices etc. Improved or superior breeds will either be imported or produced at Government livestock stations and farms and will be sold to the private sector for multiplication or fattening purposes. Research along these lines will also be carried out by the Agricultural Research Institute. In parallel, efforts will be made to raise standards and improve methods of production by encouraging the use of suitable equipment, the setting up of proper animal sheds and stables, improving the feeding of livestock by making better use of feeding stuffs, controlling or possibly eradicating animal diseases and securing improvements in general livestock management.

3. Raising Yields

The meat and other animal production targets entail increases not only in the animal population but also in yields. Table 17 gives an indication of the prospects of raising yields during the Plan period.

(*a*) *Cattle*

The biggest increase should come from dual purpose milk and meat cattle. Native cattle used both as a work animal and for meat production is expected to remain more or less static. With improved feeding and the introduction of new breeds average cattle meat yields are likely to increase from 150 okes in 1966 to 160 okes per animal per year in 1971. Milk production per milking animal could increase from 2,600 okes to 2,700 okes.

Animal Yields, 1966 and 1971

TABLE 17

	MEAT : Average Dressed Carcass Weight per Animal Slaughtered (No. of Okes)		MILK : Amount of Milk Produced per Milking Animal (No. of Okes)		EGGS : Eggs per Laying Hen	
	1966	1971	1966	1971	1966	1971
Cattle	150.0	160.0	2,600	2,700	—	—
Lambs (Sheep)	13.0	13.0	46	55	—	—
Kids (Goat)	10.0	13.0	83	100	—	—
Poultry	1.0	1.0	—	—	143	160
Pigs	68.8	68.8	—	—	—	—

Sources: Department of Agriculture and Planning Bureau.

(*b*) *Sheep and Lambs*

The successful implementation of the mixed farming, haymaking and pasture development projects, coupled with the introduction and propagation of the Chios and Awassi sheep breeds, might possibly reverse recent trends in sheep and lamb population and make possible an estimated 16 per cent increase by 1971. Average lamb yields (13 okes lamb/yr.) are unlikely to increase beyond present rates, so long as the existing relative prices of lamb meat and sheep milk continue. As things are at present, it pays the sheep breeder to kill the lamb very young when lamb prices are high, saving at the same time the milk and feeding stuffs needed to bring up the lamb. This question will be looked into ; it may be necessary to raise the age at which lambs should be slaughtered. With regard to milk yields of sheep there appear to be no serious difficulties in increasing average yields by at least 4 per cent.

(*c*) *Goats and Kids*

Available information suggests that the goat and kid population has been multiplying rapidly during 1961–1966. For 1966–1971 the projection is that animal stock may increase by about 27 per cent.

Kid meat yields are expected to increase substantially (by about 30 per cent) due to a significant increase in the proportion of tethered animals which fatten more easily.

(*d*) *Poultry and Eggs*

Poultry stock amounted in 1966 to 2.9 million birds. It had almost doubled between 1961–1966. It is estimated that during the next five years the stock may increase by about 50 per cent. This may be an ambitious target, but considering that the industry is well organized and is operating on modern lines there should be no difficulty in achieving such an expansion.

Egg yields per laying hen are expected to increase from around 143 in 1966 to about 160 in 1971.

(*e*) *Swine* (*Pigs*)

The pig population more than doubled during the period of the First Plan and reached 82,000 animals in 1966. By 1971 the pig population is estimated to be around 125,000. This expansion will be facilitated by the possible development of industrial processing of pork and related pig products.

Average meat yields per pig are not anticipated to change significantly.

4. Specific Projects and Policies for Achieving Animal Targets

4.1 Animal Breeding, Selection and Multiplication

(*a*) *Livestock Breeding Unit*

The purpose of this project is the production of female young breeding stock for issue to livestock breeders in line with the policy of encouraging mixed farming. In addition, the Unit may serve as a research, training and demonstration centre. It is intended to submit a request to the U.N. Development Programme for the establishment of this Unit as a Special Fund project. If the request is approved, Government will provide the necessary land and buildings and the normal running costs. The Special Fund will provide experts, equipment, fellowships and, it is hoped, a proportion of the livestock required for stocking the Unit.

(*b*) *Importation of Animals* (*Cattle*, *Sheep*, *Goats*, *Pigs*)

Cattle : Selected Friesian cattle will be imported for distribution and multiplication.

Sheep : This scheme provides for the introduction of the Awassi and other breeds suitable for local conditions. The sheep will be bred and subsequently distributed to selected livestock breeders for reproduction. It is expected that the project will be conducive to the increase of milk and mutton production.

On the other hand, the existing project for the importation of Chios sheep will be continued with the intention of forming a nucleus stock for a Sheep Unit.

Goats : Goats of the Angora breed will also be imported for the production of mohair.

Pigs : To upgrade and diversify existing breeds it is proposed to introduce new blood, *e.g.* the American Poland China breed, in the swine population of Cyprus thus avoiding the ill-effects of intensive inbreeding.

(*c*) *Poultry Units*

In view of the progress which has taken place in the private sector, it is proposed to scale down the Agricultural Department's operations in the production of day-old chicks and eggs and to give more emphasis on the breeding of turkeys, and the organization of laying and performance tests.

(*d*) *Other Projects*

Other projects for the promotion of animal husbandry include schemes for the encouragement of cow breeding and beef production, the establishment of a swine central testing station, a milk recording and registration of dairy cattle project, the establishment of an animal resale centre, etc.

4.2 Veterinary Services

(*a*) *Importance of Veterinary Services*

Cyprus is an island and as such it has been able to achieve a relatively high degree of freedom from diseases through import control and by maintaining a vigilant veterinary service. Nevertheless, the economic losses of animal diseases are still high and during the Plan period a determined effort will be made to reduce significantly these losses.

(*b*) *Progress during* 1962–1966

During the First Five-Year Plan systematic vaccination and other disease control measures, aided by improved laboratory facilities, enabled the eradication of a number of contagious diseases which in the past were decimating the Island's animal population (Foot and mouth, swine fever, New Castle disease of chickens and African Horse Sickness). However, because of the need to import significant quantities of frozen meat, prophylactic vaccinations will have to continue to prevent a reintroduction of such diseases.

(*c*) *Objectives during the Second Plan*

During the Second Plan the main objectives in this field will be :

(i) to increase the number of qualified professional veterinarians so that they may be able to cope with the increased demand for veterinary services ;

(ii) to establish new veterinary stations in areas where the demand is greater (for example, in areas where there is accelerated development of the livestock industry) ; and

(iii) to expand laboratory facilities so that they may be able to undertake :—

up-to-date diagnostic techniques ; the preparation locally of more vaccines ; and better veterinary health inspection.

At present the Veterinary Services perform both tasks of disease prevention and tasks that normally fall in the province of the private veterinarian. Ideally the latter tasks — for which the Veterinary Service charges a fee—should be undertaken by private veterinarians. At present though there are very few private veterinarians ; until such time as there are in sufficient number, the Government will have to continue to provide this service.

(*d*) *Near East Animal Health Institute*

This is a project which may be undertaken jointly by the Cyprus Government and the U.N. Special Fund. If finally approved by the U.N. Special Fund, it will operate as a Near East Animal Health Institute and will aim at :

- developing diagnostic techniques especially those applicable to the conditions of Cyprus and the surrounding countries ;
- developing production methods and establishing standards of biological activity of vaccines to be used in control activities ;
- holding periodic regional training courses ; and
- making available staff members to serve as consultants to other countries in the region.

4.3 Government Expenditure for the Development of Animal Husbandry and Veterinary Services

A list of expenditures earmarked for the period 1967–1971 is given in the Table 18. Both the Animal Husbandry and Veterinary Service allocations are almost three times those realized during 1962–1966.

Development Expenditure for Animal Husbandry and Veterinary Services, 1967-1971

TABLE 18

	£ 000	
1. *Animal Husbandry* (1):		
1.1 Cattle Breeding and Promotion (including Maintenance of Dairy Herd, Morphou, Imporation of Livestock, Livestock Breeding Unit (S.F. Project), Encouragement of Cow Breeding and Beef Production) ..	525	
1.2 Sheep Breeding and Promotion (including Importation of Livestock, Establishment of Animal Resale Centre and Livestock Breeding Unit (S.F. Project)) ..	184	
1.3 Goat Breeding and Promotion (including Maintenance of Stock Breeding Unit, Orites, and Establishment of Goat Resale Centre and new Goat Breeding Unit)	106	
1.4 Pig Industry (including Maintenance and Development Works and Importation of Breeding of Stock) ..	41	
1.5 Poultry Industry (including Maintenance and Development Works and Imporation of Breeding of Stock)	75	
1.6 Livestock Farms and Stations (including Maintenance and Development Works)	45	
1.7 Other (Administration, Technical Assistance and Advice to Livestock Keepers, Machinery and Equipment and Miscellaneous Expenses)	184	1,160
2. *Veterinary Services* (1):		
2.1 Disease Control	140	
2.2 Major Projects (Near East Animal Health Institute) ..	70	
2.3 Establishment of New Veterinary Stations, Improvements to Existing Stations, Equipment, etc. ..	100	
2.4 Other (including Administration)	130	440
Total		1,600

C. FORESTS

1. Significance of Forests

The direct contribution of forests to agricultural production is small. The value of timber produced in 1966 was in the region of £186,000 or about 0.5 per cent of the gross output of the agricultural sector. It is estimated that the value of timber production will reach £400,000 in 1971 and that this production will provide an important source of raw material for the local timber utilization industry. It should be noted in this connection that the value of timber and wood products currently imported to Cyprus is of the order of £2.5 million per year.

As will be seen from Table 19, almost one fifth of the total area of the Island is covered with forests. These forests combine with the picturesque Troodos and Kyrenia mountains to produce some of the most beautiful landscapes to be found in the Mediterranean region. Moreover, the fact that the forests lie on steep mountain slopes has a mitigating effect on soil erosion and floods and facilitates the conservation of water.

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(1) Does not include recurrent expenditure provided for in the Ordinary Budget.

Forest Area and Ownership in 1966

TABLE 19

	Square miles	Percentage Share in Total
Forest Land	669.51	18.7
of which—		
(i) Main State Forests	532.74	
(ii) Minor State Forests	76.56	
(iii) Communal Forests	8.03	
(iv) Privately Owned Forests	52.18	
Non-Forest Land	2,902.49	81.3
Total Area of Cyprus	3,572.00	100.0

Source : Forest Department, Annual Report, 1966.

2. Forest Development during 1962–1966

As will be seen from Table 20 during the period of the First Five-Year Plan very satisfactory progress was made in the forestry sector (mainly in the Main State Forests).

Achievements in Forest Development during 1962–66, Contrasted to All Forest Development Work up to 1961

TABLE 20

	Up to 1961	1962–66
Project :		
Reforestation (donums)	67.817(1)	32,684
Forest Roads (miles)	596	134
Major Improvements to Forest Roads (miles)	—	128
Jeep tracks (miles)	2	11
Fire traces (miles)	370	763

Source : Forest Department.

Until 1966 the Minor State Forests were administered by the District Administration, but on account of the absence of trained personnel no development had taken place. As from 1967 they have been taken over by the Forest Department, which is planning to develop them on the basis of the "multiple use" principle.

3. Forest Development during 1967–1971

3.1 Objectives of Forest Development Policy

The objectives of forest development policy may be summarised as :

- Maintaining and renewing the forest stock ;
- preventing forest fires and reforesting areas destroyed by such fires ;

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(1) This figure refers to the period 1946–1961.

- utilizing the permissible yield of mature trees for the local timber and wood industry ; and
- developing forest amenities and recreational facilities, including national parks, roadside plantations and embellishment of public and other grounds.

3.2 Government Funds Allocated for Achieving the Objectives of the Second Plan

A summary of development funds allocated for forest development is given in Table 21.

TABLE 21 **Forest Development Expenditure, 1967–1971**

	£ 000
Establishment, Maintenance and Protection of Forests ..	400
Forest Communications—Roads and Telecommunications	200
Accommodation and Housing	40
Research and Extension	40
Other (including Administration)	170
Total	850

Reforestation

The area reforested during 1962–1966 was 32,684 donums. It is hoped that about 50,000 donums of additional area will be reforested during 1967–1971.

Silviculture

The main purpose of this activity is to tend the newly reforested areas or to clean or thin easily accessible forest areas. About 116,000 donums were covered during 1962–1966. A similar level of activity is planned for 1967–1971.

Forest Nurseries and Production of Forest Seeds

The Akhna nursery taken over from the District Administration will be developed. Forest seedlings are produced in other nurseries to meet the needs of reforestation and tree planting. Some forest seeds are exported.

Timber Utilization Centre

About £45,000 were spent during the First Five-Year Plan to set up a Timber Utilization Centre at Morphou which, *inter alia*, would demonstrate that, when treated properly, Cyprus timber is of good quality for a variety of purposes. The Centre requires investment for the completion of the saw-mill and the installation of seasoning kilns, etc. A feasibility study on this project and on ancillary industries has been carried out and more details are given in the Chapter on Manufacturing.

Forest Roads and Bridges

During 1962–1966 about 134 miles of new roads, feeders and bridges were constructed by the Forest Department. During 1967–1971 it is proposed that another 125 miles be constructed. This does not include reconstruction and major improvements to existing roads. A lot of widening and improvement is necessary to facilitate the transport of timber.

Forest Telecommunications

Successful forest fire fighting requires a satisfactory telecommunications network. About £18,000 were spent for this purpose during 1962–1966. During 1967–1971 an additional amount of £36,000 will be provided for the installation of new land lines, radio telephones and V.H.F. base stations.

Accommodation and Equipment

A sum of about £32,000 was spent during 1962–1966 for forest buildings and equipment. For the same purpose, £40,000 have been allocated for 1967–1971.

Minor State Forests

As it has been mentioned, the Minor State Forests covering an area of about 77 square miles have been taken over by the Forest Department from the District Administration. An *ad hoc* committee is currently studying the future use of these forests and will advice Government accordingly. The Forest Department in co-operation with other Government Departments will prepare the necessary development plans for these areas on the basis of the multiple use principle. This is important, because the condition of these forests is quite heterogeneous ; some will be planted with forest trees, others with fruit trees and still others will be opened to controlled grazing.

Development of Communal Forests

At the moment there are 96 Communal Forests stretching over an area of almost 16,000 donums all over Cyprus. These forests were established in the 1940's with the object of producing wood fuel for the villages. Most of them need tending and improvement to make them more productive. In many cases it will be necessary to do enrichment planting not only of forest trees, but also of fruit trees.

Forest Amenities and Recreation

A number of picnic grounds were established in the National Parks during 1962–1966. Consideration will now be given to the erection of tourist pavilions or small kiosks at beauty spots to serve foreign and local tourists. In parallel, roadside tree planting will be encouraged. Some 24 miles of roadside plantations were made during 1962–1966, besides the embellishment of a number of Government grounds with forest trees and bushes.

Timber Production

The timber potential of Cyprus forests on a sustained yield basis has been estimated to be 1.8 million cubic feet round under bark. However, in the forests there is overmature growing stock which is deteriorating and which is affecting adversely the young and natural regeneration. It has been estimated that for the next 20 years the annual yield could be raised to 2.7 million cubic feet round under bark because of the above factor.

The quantity of timber removed annually now is about one million cubic feet and could be doubled by 1971.

D. FISHERIES

1. Contribution of Fishing to the Economy

As in the case of forests, the present contribution of fishing to the agricultural sector's output is small—less than 1 per cent. The value of fish collected ranged from about £200,000 in 1961 to £250,000 in 1966. About half of the fish collected is caught around the shores of the Island, the other half by trawlers in the open sea and in distant international waters.

From an employment point of view fishing affords a living to just over 600 fishermen. Of these 423 are full-time and the rest part-time or occasional fishermen. In 1966 they owned 313 inshore fishing boats. Trawl fishing which contributes 50 per cent of fish catches is carried on by 11 trawlers. The number of trawlers allowed to fish around Cyprus territorial waters is restricted by law to 12 so that inshore fishing may be protected. No pelagic fishing takes place at the moment.

2. Progress during 1962–1966

From a fish production point of view no major progress was made during the First Five-Year Plan. But the way was paved for a systematic and sound exploitation of Cyprus fishery grounds in the future. The starting point on fisheries development was a preliminary study made by Dr. Vita Fodera of the FAO(¹), who assessed possibilities and problems and pointed out the lines along which further research could be conducted. The next step was the establishment and staffing of a Fisheries Department to administer and guide the fisheries development effort.

(¹) FAO : "Fishery Development Possibilities in Cyprus", 1961.

Inshore Fisheries

Inshore fisheries were inadequately and inappropriately exploited. The boats were small and fishing shelters were lacking. Likewise most of the fishermen lacked the means and know-how to make improvements to their boats. To remedy the situation the Government constructed a number of fishing shelters and initiated a credit programme to aid fishermen improve their boats or to acquire new ones. In parallel, an effort was made to protect inshore fishery from trespassing trawlers and by extending the closed season for trawlers.

Trawl Fisheries

Credit facilities were also offered to trawler owners to enable them to bring about improvement in the fleet and its equipment, including the installation of the necessary cold storage facilities. But no major progress was made in long-distance trawl fishing.

Research and Exploration of Fishing Grounds

With the establishment of the Fisheries Department it became possible to initiate in 1965 surveys and research for assessing the potentialities of fishing grounds. Although this exploration is still being continued, first results are encouraging for inshore and pelagic fishery but not for trawl fishery around the territorial waters of Cyprus.

3. Fisheries Development during 1967–1971

3.1 Objectives

The basic objective of fishery development is to increase fishing output both in inshore and long-distance areas in the best and most efficient way.

More particularly it is intended :

- To continue the exploration of inshore, pelagic and long-distance fishing grounds ;
- to look into other possibilities of fishery development such as sponge fishing and fresh water fish culture ; and
- to provide financial facilities and extension services to fishermen and trawler owners to enable them to improve and expand their activities.

3.2 Fish Output Prospects

Available information suggests that in the longer run it may be possible for inshore fishery to double its output, but during 1967–1971 it is unlikely to expand by more than 30 or 40 per cent.

As it has been indicated, prospects for trawl fishing are not encouraging around the Island's continental shelf, but there are unlimited possibilities for long-distance trawling along the African coast and elsewhere. What is required is the necessary entrepreneurial spirit and interest in this field.

As to pelagic fishing and fresh water fish culture the prospects have yet to be assessed.

3.3 Policy Measures and Projects

Inshore Fisheries

Research and exploration for fish stock estimation and appraisal of the optimum fishing effort permissible will be continued. Financial facilities will continue to be made available to small fishermen to improve and better equip their boats. A few more fishing shelters will be constructed. The enforcement of fisheries laws, hitherto in the hands of the Customs Authorities, will be transferred to the Fisheries Department and the necessary personnel will be provided for the control and regulation of fishing.

Pelagic Fishing

The Government has already secured the services of an FAO Master Fisherman and has rented a properly-equipped boat for exploratory pelagic fishing. When results are obtained, they will be passed on to interested fishermen.

Long-distance Trawl Fishing

This is an area with good prospects. At the moment most of the trawlers are not adequately equipped or staffed for such enterprises. Government will extend assistance in this direction and will provide credit facilities through the Loan Commissioners. In addition, it is considering the granting of operational subsidies to encourage trawler-operators to stay out in the ocean for longer periods, with a view to exploring more grounds and catching more fish. This will be done for an initial period until trawler owners discover such grounds and become convinced of the profitability of such an enterprise.

Fresh Water Fish Culture

Consideration will also be given to the introduction of appropriate fish in the Island's water dams and lakes. For the Akrotiri Lake of Limassol a special development project is currently being studied which, if found to be feasible, will be submitted to the U.N. Development Programme for consideration as a Special Fund Project.

Proposed Development Expenditure, 1967–1971

Government development expenditure proposed for fisheries is given in Table 22.

Development Expenditure for Fisheries, 1967–1971

TABLE 22

	£000
Research, Investigations and Surveys, etc.	80
Fishing Shelters	80
Credit Facilities	100
Other Projects, (including Fish Culture)	100
Administration, Technical Assistance, etc.	40
Total	400

E. RURAL DEVELOPMENT

Several measures designed to promote the economic and social conditions of the countryside are indicated in various parts of this Plan under Health, Education, Social Services, Transport and Communications, Electricity and so on. In this Chapter reference will be made to those projects and measures traditionally entering the Development Budget under the title " Rural Development ". It should be pointed out, however, that agricultural and rural development aim, *inter alia*, at the same ultimate objective, namely, the raising of the incomes and the improvement of the living conditions of the rural areas.

A list of proposed expenditures on " Rural Development " will be found in Table 23. These expenditures should be examined in the light of the objectives they are intended to serve, that is (*a*) to supplement other measures taken for improving the incomes and living conditions of villagers, and (*b*) to help villagers help themselves by providing them with such incentives as subsidies and low-cost credits.

Rural Development Expenditure, 1967–1971

TABLE 23

	£000
Assistance to Rural Municipalities and Improvement Boards	500
Village and Farm Roads (1)	400
Village Streets	300
Other Rural Development Projects (incl. Resiting of Villages, Village Public Buildings, Rural Housing, Anti-flood Works, etc.	640
Total	1,840

F. AGRICULTURAL AND RURAL DEVELOPMENT EXPENDITURE BY THE GOVERNMENT, 1967–1971

The role of Government in spear-heading the agricultural and rural development effort is indicated in the summary of development expenditures in Table 24. It will be seen that such expenditures will be increased from £12.3 million during the First Five-Year Plan to £19.2 million during the Second —an increase of 56 per cent. If rural development expenditure are added, total expenditure will be increased from £14.5 million to £21.0 million respectively.

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(1) The provision for " Village and Farm Roads " does not include funds for asphalting of village roads for which provision is made in the Road Development Programme of the Ministry of Communications and Works (see Chapter on Transport and Communications).

Summary of Development Expenditure for the Broad Agricultural Sector, 1962–1966 and 1967–1971

(£ 000)

TABLE 24

	1962–66 (Realized)	1967–71 (Allocated)
1. Agriculture—Plant Production	3,050	5,050
2. Animal Husbandry	401	1,160
3. Agricultural Research Institute	395	750
4. Water Use Improvement and Control ..	185	1,900
5. Veterinary Services	144	440
6. Forest Development	665	850
7. Fisheries Development	70	400
8. Water Development	7,439	8,650
Total	12,349	19,200

Source : Planning Bureau.

Almost half of the proposed development expenditure will comprise direct Government fixed investment ; about one fifth will represent subsidies and credits which are designed to secure improvements and promote particular developmental policies and projects in the private sector ; the rest consists of pre-investment, research, extension, technical assistance and administrative or organizational expenditures, which are necessary for the preparation and implementation of projects and policies. These expenditures are not all the expenditures earmarked for the agricultural sector. There are other expenditures, such as subsidies on cereals and vines, for extension services, etc., which are financed from the Ordinary Budget. These latter expenditures will amount to another £5–7 million.

CHAPTER 6

WATER RESOURCES

1. Introduction : Water as a Key Factor in the Island's Development

Water is a key natural resource, the productivity of land, labour and even capital investment, depending in no small measure upon the adequacy of the water supply. Given the low rainfall, even when the existing supply is increased, water will continue to be one of the scarcest resources, so that its proper conservation, development and utilization will continue to command very high priority in the formulation of policies and plans for the country's economic and social development. Agriculture, industry and tourism, the mainstays of the Island's economy, are directly dependent on the availability of water.

The role of water as a pace-setter in agriculture has already been stressed. Similarly, no tourist development on any appreciable scale can be expected unless the water supplies needed for the new hotels, tourist centres, swimming pools and tourist villages are made available. Increased quantities of water will also be needed for the Island's expanding industry. And, finally, but by no means least in importance, is the demand for increased supplies to meet the needs of the Island's growing population and its rising living standards. It was for this reason that so much emphasis was placed on water resource development during the First Five-Year Plan.

In the following paragraphs an assessment will be made of the progress recorded during the period of the First Plan. In the light of this assessment, the objectives and targets of the Second Plan will be established ; and projects and policy measures will then be outlined designed to enable the attainment of such targets.

2. Water Conservation and Development during the Post-Independence Period, 1960-1966

Before reviewing the results of water development policy and planning during the First Plan, it might be useful to comment briefly on the main hydrological characteristics of the Island and the situation existing prior to the embarkation on a water development programme.

2.1 The Island's Water Resources

2.1.1 Sources of Water

All available water in Cyprus has a meteoric origin. Records obtained from a large number of rainfall recording stations all over the Island show an average annual precipitation of about 19 inches (¹), although this average could be as high as 27 inches in a very wet year and as low as 10 inches in a very dry year. Apart from year to year fluctuations, there are significant differences in the amount of precipitation as between different regions and areas. Thus, the annual average ranges from 11.5 inches at Morphou Bay to 44 inches on the summit of Troodos.

The total quantity of rainfall represents approximately one thousand billion imperial gallons of water in an average year. In the long run this is the only " natural " source of water. It is, of course, possible that additional water supplies might be secured through sea water desalination and cloud-seeding methods of artificial rainfall. As will be seen, these possibilities have been examined but they do not offer an immediate answer to the country's pressing problems, nor are these propositions economically feasible at the moment.

2.1.2 Disposal of Rainwater—Tentative Water Balance

There are four ways in which water may be disposed of : through surface run off, sub-surface infiltration, evapotranspiration and evaporation. No accurate estimates are available of the way in which total rainfall is disposed of, since various surveys and investigations undertaken in this connexion have not yet been completed. Preliminary estimates, however, are given in Table 1.

These estimates, although very tentative, bring to light some interesting facts about the water problem of Cyprus :

First, that the bulk of the water (about 62 per cent) is lost through evaporation and evapotranspiration from non-cultivated areas. Only 23 per cent of the rain is used up by cultivated areas.

Second, that water used for irrigation purposes from dams, springs or boreholes comprises only about 11 per cent of average rainfall.

Third, that ground water over-extraction comprises 2.6 per cent of total rainfall, or about 50 per cent of the volume of water pumped.

Fourth, that surface losses to the sea amount to 40.5 billion gallons per year, or 4 per cent of total rainfall. Another 15 billion gallons are lost underground, probably also escaping to the sea (²).

(¹) Average of the past 50 years.

(²) Other estimates suggest that these losses are much higher.

TABLE 1

Disposal of Rainwater in Cyprus

Form of Disposal	Amount of Water in Billion Gallons					Percentage Share in Total				
	Surface Run-off	Groundwater (incl. River-bed Infiltration)		Evapo-transpiration and consumption from direct rainfall	Total	Surface Run-off	Groundwater (incl. Riverbed Infiltration)		Evapo-transpiration and Consumption from Direct rainfall	Total
		Pumped and Sub-surface	Springs				Pumped and sub-surface	Springs		
1. Perennially and Seasonally Irrigated Crops (incl. Irrigated Cereals)	34.0	51.0	6.0	30.0	121.0	3.4	5.1	0.6	3.0	12.1
2. Rainfed Crops				200.0	200.0				20.0	20.0
3. Forests and Shrubs ..				200.0	200.0				20.0	20.0
4. Pastures and Other Grass				100.0	100.0				10.0	10.0
5. Evaporation from Bare Land, Fallow Land, Built-up Areas and Water Surfaces				344.5(1)	344.5(1)				34.4	34.4
6. Domestic, Animal Husbandry and Industrial Water		4.4	1.3		5.7		0.5	0.2		0.7
7. Groundwater Over-extraction		—26.7			—26.7		—2.7			—2.7
8. Sub-surface Losses ..		15.0			15.0		1.5			1.5
9. Surface Losses to the Sea	40.5				40.5	4.0				4.0
Total ..	74.5	43.7	7.3	874.5	1,000.0	7.4	4.4	0.8	87.4	100.0

Source : Water Development Department.

(1) Evaporation only.

These estimates indicate clearly the two-pronged approach to the water problem in Cyprus, namely, (*a*) the necessity for impounding of river water (surface run-off) ; and (*b*) the need for control of groundwater extraction and improvement in water utilization.

2.2 The Water Problem in 1960

At the time of Independence there was not only the problem of water shortage, over-extraction and wastage through improper use, but also the organizational problem. The Water Development Department was neither well-equipped nor adequately staffed to undertake proper water management and major water development projects. Data were also lacking. There was hardly any water policy. On the other hand, there was the urgent need to speed up development in this vital sector in line with Government's overall policy to revitalize the economy.

A. U.N. Mission, which amongst other things had surveyed the water situation at that time, remarked : " The direction of water policy . . . .during the next five years should be concentrated upon the development and use of ground-water and surface water resources. To achieve the desired result, this must not be done as in the past, when no clear water policy was ever formulated and when water development was carried out on a village scale, largely in the form of individual and isolated schemes. No real inventory was made of actual water resources. Drilling was not controlled and illegal drilling had become quite common. Water distribution and use were not based on adequate engineering and economic programming. Research was neglected both as to resource evaluation and specific crop water requirements for irrigation. Finally, no systematic effort was made to improve the antiquated, archaic and confusing body of water legislation "(1).

2.3 Aims of Water Development Policy during the First Plan—Results and Outstanding Problems

The aims of policy and the tasks set for the First Plan were defined to be :—

(*a*) The carrying out of a survey of the total water resources of the Island and of research so as to discover and exploit underground reservoirs ;

(*b*) the replenishment and protection of existing underground water resources ;

(*c*) the conservation, storing and measured use of rainwater and the prevention of its flow to the sea ;

(*d*) the supply in sufficient quantities of piped water to all villages and towns for domestic and industrial use ;

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(1) U.N. " Cyprus—Suggestions for a Development Programme " (p. 8).

(*e*) study of the feasibility of establishing sea water desalination plants ; and

(*f*) the revision of the existing complicated water legislation.

2.3.1 Inventory of Water Resources

Detailed and reliable hydrological and other data are indispensable for the preparation of sound water development plans and for the initiation of measures to conserve and control water. In recognition of this fact, the Government sponsored a series of surveys and investigations as follows :

The Groundwater and Mineral Resources Survey Project (***undertaken in cooperation with the U.N. Special Fund***)

Under a relevant agreement signed in November 1962 with the U.N. Special Fund a five-year project was undertaken jointly with the United Nations designed to assess the Island's groundwater and mineral resources. The purpose of the survey (besides mineral exploration and assessment) was—

—to investigate, assess and report on the groundwater resources of the whole Island, priority being given to " critical " water supply areas ; and

—to strengthen the Geological Survey Department and the Drilling Section of the Water Development Department through the training of local staff in the use of modern investigation and other techniques.

The investigations were to be aided by geological and geophysical exploration and drilling. Appropriate geological maps were to be prepared. Under the Plan of Operation, the Cyprus Government undertook to contribute £839,510 in the form of counterpart personnel, office accommodation, equipment, supplies etc. and the Special Fund £512,438, mostly in the form of experts, special equipment and supplies.

The project is concentrating its attention on a fairly accurate evaluation of the extent and safe yield of the various aquifers. An extensive network of wells and boreholes has been drilled all over the Island and is being measured systematically so that ultimately it may be possible to assess the extent of over-pumping and establish a water balance. Parallel with this work, detailed investigations are going on in cooperation with the Water Development Department for groundwater in new areas. Thus, so far new aquifers have been discovered in the Tremithos–Vassilikos belt, the northern foothills of Troodos and on the Kyrenia range.

The Project's findings have also verified the extent of sea intrusion in the Famagusta, Morphou and Limassol areas. In the case of Famagusta the annual water replenishment has tentatively been estimated to be about 25 million cubic meters per year compared with 45 million cubic meters of annual pumpage. Hence over-extraction in this area is about 20 million cubic meters. In the Morphou and W. Mesaoria area the average annual replenishment is about 50 million cubic meters as against an annual pumpage of 80 million.

Other Surveys

Other survey work carried out at the time included a project undertaken by a group of experts under bilateral technical assistance arrangements. The project was coordinated with the U.N. Special Fund Project and the work of the Department of Water Development. The purpose of the project was to appraise the groundwater resources of the Kyrenia range by means of geological and geophysical exploration, as well as by drilling of a number of boreholes. A reconnaissance survey of the Hilarion Limestone was carried out and a selected number of borehole sites was located by means of geological mapping and the use of aerial photographs. Some 21 boreholes were drilled out of which 12 were productive, yielding about 79,000 gallons per hour of good quality drinking water.

Another survey, undertaken under bilateral technical assistance in close cooperation with the Water Development Department, covered the Morphou aquifer and endeavoured to establish the extent of sea intrusion and over-pumping. The findings of the study were made available to the Special Fund Project referred to earlier.

In parallel, systematic records and data pertaining to the Island's water resources continued to be collected by the Hydrological and Hydrogeological Sections of the Water Development Department, whose staff has cooperated closely in the implementation of the U.N. Special Fund Project.

The preliminary results of these pre-investment surveys and ivestigations may be summed up as follows :

(*a*) With the exception of the Kyrenia limestone and the Tremithos–Vassilikos area, groundwater extraction far exceeds the safe yield of the main acquifers.

(*b*) Over-extraction has led to an alarming drop in the groundwater table, especially in the areas of Famagusta and Morphou, where there is evidence of sea intrusion.

(*c*) The situation has been aggravated by the drilling of boreholes (in some cases illegal). The upsurge in drilling (legal or not) was prompted by the high profitability of irrigated crops.

Consideration will now be given to the measures taken to replenish and conserve the water.

2.3.2 Replenishment and Conservation of Water Resources

There are two main methods by which depleted water resources may be replenished or conserved :

- (*a*) By recharge works, i.e. by storing rainwater and diverting it into the deficient aquifers at points where absorption is not hindered by impervious rocks; by direct recharge through wells, spreading grounds etc.
- (*b*) By restricting water extraction to the point where an equilibrium is established between the rate of natural and artificial replenishment and the rate of extraction.

(*a*) *Recharge Works*

During the last five years considerable work was done in this field. Large recharge dams were built in Morphou, Kiti and Famagusta some of which serve also for spring irrigation. In addition, about 100 small recharge works were executed in the critical areas, mostly in the Famagusta region.

(*b*) *Regulation of Water Extraction*

The success of artificial recharge is difficult to assess. In any case, one might question the wisdom of embarking on expensive artificial recharge projects if uncontrolled pumping goes on. It was for this reason that in parallel with the recharge programme increasing emphasis has been placed on the introduction of ways and means for tightening up control over extraction. Special legislative powers were taken for this purpose by the enactment of the Water Supply (Special Measures) Law of 1964 and 1965. This Law empowers Government to declare a critical water area as a " controlled area " and within such an area to impose restrictions and to enforce regulations governing the amount of water to be extracted. The Law envisages that control of extraction will be regulated through the installation of water meters on all boreholes within the area. In determining the amount of water to be extracted from each borehole an effort is made to ensure that only the right amounts of water required by the particular crops and plantations are allowed to be pumped on the basis of actual water requirements and irrigation schedules and designs drawn up by the Department of Agriculture. The potentiality of the aquifer is of course a fundamental consideration which is taken into account in fixing the quantity of water to be extracted. Under the provisions of another Law—the Citrus Groves Survey and Registration Law—enacted in 1966 cultivation of new citrus plantations is controlled, through the issue of licences, especially in " critical water areas " where the provisions of the Water Supply (Special Measures) Law have been invoked.

By the end of 1966, 12 such water control areas had been declared and the task of installing water meters and assessing the precise water requirements of each farmer has already started.

2.3.3 Water Storage and Irrigation Projects

The building of dams for irrigation purposes was also accorded high priority. In this way it was possible to save precious water from escaping to the sea and to expand the land under irrigation which has much higher yields than rainfed land. To enable progress in this direction to take place, it was necessary at the same time to strengthen the staff of the Water Development Department.

Major Irrigation Works : Altogether about 20 major dams (¹) were constructed during the post-Independence period 1960–1966 increasing water storage capacity seven times the total capacity created in all the dams built prior to 1960. Total dam capacity was increased from approximately 1,300 million gallons in 1960 to 10,000 million gallons in 1966 (see Diagram overleaf). If improved irrigation systems are applied, the additional land which will come under irrigation following the building of these dams will be about 17,000 donums of perennial and spring irrigation.

Some of the big dams are still under construction ; in other cases the dam has been completed, but work on the distribution system is still under way ; there are also cases in which, mainly for administrative reasons, no effective use has yet been made of the water stored in the dams. For all these reasons, most of the land which was expected to come under perennial irrigation following the building of these dams will do so during the period of the Second Plan.

The basic criterion employed in selecting major irrigation projects was the benefit-cost ratio. On the basis of the technical data available at the time, all the major dams built had a favourable benefit-cost ratio, although the priority assigned to some projects also took into account the social factor. However, a serious handicap impeding the ranking of projects in order of highest economic priority has been the absence of a comprehensive master plan for water. Other difficulties in this connection emanated from the shortage of staff necessary to carry out adequate preliminary investigations and designs, to explore alternative sites etc. In the initial years, benefit-cost calculations were of necessity rough, but as staffing and other problems were overcome, these calculations were gradually improved. Moreover, because of the inadequacy of preliminary work, the final cost of projects sometimes exceeded by far the original estimates ; and this inevitably upset the benefit-cost estimates.

Minor Irrigation Works : Some 200 minor irrigation schemes were executed all over the Island. These works consist mostly

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(¹) Including five major recharge works some of which are partly used for spring irrigation.

DAMS CONSTRUCTED BEFORE 1960

No.	NAME	TYPE	H.T.	M.G.	YEAR
1	Kouklia	Earth	20	1000	1900
2	Lymbia	Masonry	17	4	1945
3	Lythrodhonda	"	35	7	1945
4	Kalokhorio (Kt)	"	30	18	1947
5	Akrounda	"	22	5	1947
6	Galini	"	36	5	1947
7	Pera	"	30	7	1948
8	Petra	"	30	5	1951
9	Lythrodhonda	"	34	7	1952
10	Kafizes	"	75	25	1953
11	Ayios Loucas	Earth	11	100	1955
12	Gypsos	"	11	22	1955
13	Kandou	Masonry	43	8	1956
14	Perapedhi	Con Grav	60	12	1956
15	Pyrgos (Tyll)	"	60	60	1957
16	Trimiklini	"	105	75	1958

Total Storage Capacity 1360

1960-1962 PROJECTS

No.	NAME	TYPE	H.T.	M.G.
17	Sotira	Earth	25	10
18	Prodhromos	"	20	25
19	Panayia (P)	"	23	10
20	Morphou	"	37	450
21	Lefka	Con. Grav	80	80
22	Geunyeli	Earth	50	230
23	Ayios Yeorgios	"	20	20
24	Athalassa	"	42	174
25	Aloa	"	15	4

Total Storage Capacity 1003

1963 PROJECTS

No.	NAME	TYPE	H.T.	M.G.
26	Argaka Makounda	Rockfill	135	253
27	Ayia Marina	"	108	66
28	Ayia Napa (7)	Earth	27	12
29	F'sta Anti-Flood	"	25	36
30	F'sta Rech (Ay Mam)	"	16	11
31	Kanli Keuy	"	63	245
32	Mia Milea	"	71	74
33	Ovgos	"	52	186
34	Pomos	Rockfill	126	189
35	Tremithios	Earth	74	355
36	Paralimni (45)	"	15	25

Total Storage Capacity 1482

1964 PROJECTS

No.	NAME	TYPE	H.T.	M.G.
37	Agros	Earth	86	22
38	Phrenaros (6)	"	18	25
39	Kalopanayiotis	"	128	100
40	Dherinia	"	20	5
41	Mavrokolymbos	"	155	480
42	Polemidhia	"	147	750
43	Liopetri	"	58	80
44	Fresh Water Lake	"	10	1000
45	Ayios Nicolaos	"	6	300
46	Paralimni Lake	"	3	300

Total Storage Capacity 3062

N.B. Total storage capacity to date :10270 million gallons

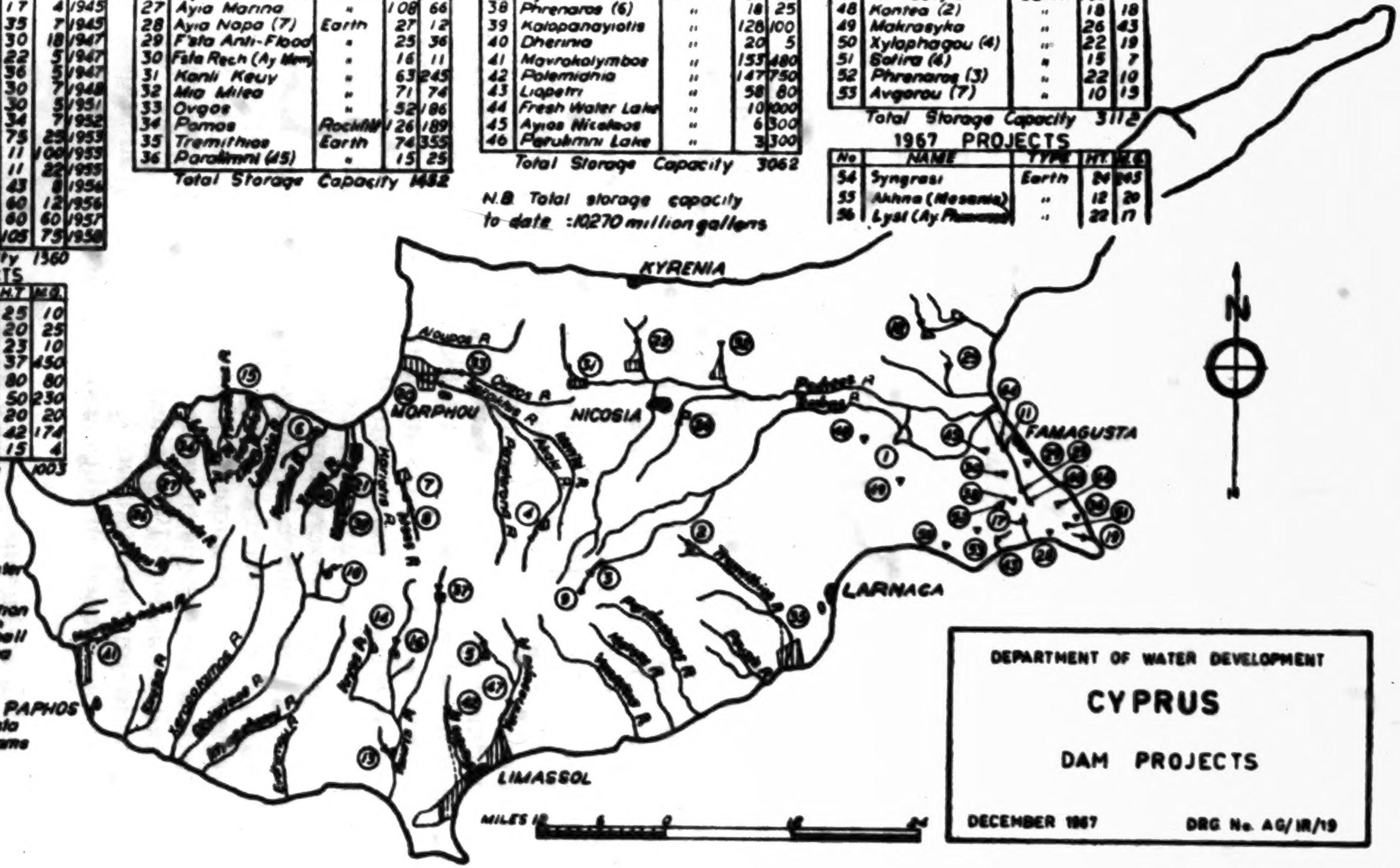
1965-1966 PROJECTS

No.	NAME	TYPE	HT.	M.G.
47	Yermasoyia	Earth	163	3000
48	Kontea (2)	"	18	18
49	Makrasyka	"	26	43
50	Xylophagou (4)	"	22	19
51	Sotira (4)	"	15	7
52	Phrenaros (3)	"	22	10
53	Avgorou (7)	"	10	13

Total Storage Capacity 3112

1967 PROJECTS

No.	NAME	TYPE	HT.	M.G.
54	Syngrasi	Earth	84	365
55	Akhna (Mesaria)	"	12	20
56	Lysi (Ay. [illegible]	"	22	17



HT. refers to height in ft. from foundation

MG means capacity of water in million gallons

YEAR is the year of completion

Phrenaros (6) means six small dams in Phrenaros area

Note: All dams in Famagusta area are recharge dams

----- Conveyor

▨ Area Irrigated

DEPARTMENT OF WATER DEVELOPMENT

CYPRUS

DAM PROJECTS

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of small canals, concrete channels or conveyor pipelines, river intakes or pumping schemes which aim at utilizing the water of springs, brooks or rivers on a small scale for the benefit of groups of farmers who organise themselves into an irrigation division or association. The area affected by these projects, some of which comprised improvements to existing schemes, was 13,000 donums perennially irrigated, 7,000 donums coming under spring irrigation and about 40,000 donums under spate irrigation in winter.

2.3.4 Domestic Water Supplies

(*a*) *Village Water Supplies*

In 1961 69 villages had no piped water supply at all and obtained their water from wells or nearby springs. Moreover, in the case of almost one third of the villages of the Island the supply was considered unsatisfactory being less than 10 gallons per person. House-to-house distribution of domestic water was practically unknown. By the end of 1966 all villages except 4 (with a total population of about 1,000) had been provided with piped supplies. The number of villages with unsatisfactory piped supply had dropped to 7. House-to-house connections of water had been installed in 308 villages representing about 67 per cent of the rural population. All village domestic water schemes were executed by the Government Water Development Department. The schemes are administered by Village Water Commissions operating under the chairmanship of the District Officer of the district concerned. As a general rule, the projects are financed through a Government grant representing 50 per cent of the cost and a village contribution for the balance, which is usually provided through a long-term low interest Government loan. Per capita water requirements vary from village to village and from time to time. In 1931, when the standard of living was low, 4 gallons per person were regarded as satisfactory. In the early 1950's the standard was raised to 10 gallons or more. In 1961 average consumption was 15 gallons and by 1966 it was raised to 20 gallons. In view of the rapid improvement in living conditions, additional supplies will be needed in the next few years.

(*b*) *Town Water Supplies*

Substantial improvements were effected to town water supplies so that all towns, with the exception of Famagusta, now enjoy satisfactory supplies. This should be contrasted with the situation which had prevailed until recently when all towns (except Limassol) were suffering from serious shortages especially in periods of peak demand in the summer, when water rationing had often to be resorted to.

Nicosia and Suburbs : Nicosia (with its adjoining suburbs) has managed to meet the steadily growing needs of its population (over 110,000 in 1966) through a continuous extension of the sources of supply which by now number 64 boreholes located around the town and as far away as Morphou. It would have been possible for the water problem of Nicosia to have been solved long ago had the so-called Morphou Bay Scheme not been partially put out of action as a result of the deterioration of the groundwater situation in the Morphou area. The Morphou Scheme is now operated only in an emergency or to satisfy peak demand. Present sources were able to meet a per capita per day summer peak demand of about 50 gallons in 1966. Nevertheless, the situation is likely to deteriorate in the near future partly because of a fast population growth and the influx of foreign visitors and partly because the yields of most boreholes are either being depleted or are threatened with increased salinity. One of the peculiar problems concerning Nicosia arises out of the existence of three separate authorities with domestic water responsibilities. The Nicosia Water Commission which administers the supplies exclusively within the walled city ; the Nicosia Water Board, a statutory authority having jurisdiction roughly corresponding to the Nicosia municipality ; and the Greater Nicosia Scheme, administered by the Government and covering the needs mostly of the suburbs. The situation in the Nicosia Water Commission zone is unsatisfactory because of the outdated and wasteful saccorafi(1) system of water distribution. Measures for modernising this system (which affects about one fifth of the consumers) will have to be considered ; and because of the extensive street excavations which will be entailed, the timing of the implementation of such measures should be so arranged as to coincide with the groundwork for the proposed Nicosia sewage scheme. The situation in the Water Board and the Greater Nicosia Scheme areas is satisfactory ; all consumption is metered and well controlled. The existence of three autonomous authorities is due to historical reasons, which need not detain us here. The important point is that for a physically compact area, such as Nicosia and its suburbs, the existence of three bodies is no longer justified. It involves duplication of administrative costs and hinders the proper and efficient design of overall improvement and control schemes.

Limassol : This is the second largest town with a population approaching 50,000. With the completion of the Yermasoyia scheme in 1966, the town will have enough water to meet its needs for over five years at least.

Famagusta : In this, the third largest town and popular tourist resort, the situation is more serious. All sources of supply are from boreholes which are gradually being depleted or are becoming saline as a result of over-pumping. Various possibilities for bringing additional supplies to the town have been examined and some of these are still under serious consideration. One of the solutions proposed has been the setting up of a sea water desalination plant. A detailed feasibility study in this connection was carried out in 1963 by the Bechtel Corporation, under technical assistance arrangements. A further feasibility study was carried out more recently by Preece, Cardew and Rider, Consulting Engineers. However, the cost of desalinated water was found to be too high and a decision on desalination was, therefore, postponed until other possibilities had been explored. Desalination would be embarked upon as a last resort. This does not mean, however, that in the future, as cost-reducing innovations are being introduced in water desalination technology, the installation of a desalination plant might not become an economic proposition—or a dire necessity. Until that happens, however, the Government is working on other projects which are expected to relieve the problem and provide a long breathing space.

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(1) A system whereby fixed shares of water flow in a consumer's distribution box.

Larnaca : Until recently, the water supply of this town depended on a two-century old chain-of-wells, whose yields were subject to extreme fluctuations and were very unreliable. Moreover, the town was served with the antiquated " saccorafi " system which was wasteful and resulted in an uneven distribution to areas lying at different heights. During the summer months rationing had become the rule. A three-stage scheme was initiated during the period of the First Plan designed to meet the town's water supply requirements over a long time ahead. The two stages were completed by 1966 at a cost of over £100,000. The third stage involving the replacement of all " saccorafia " with water meters and new piping facilities was completed in 1967. The town now has an ample and satisfactory supply.

Paphos and Kyrenia : The water supplies of both Paphos and Kyrenia were, until 1962, so precarious that in the event of a drought, the towns, and especially Paphos, might be left almost without water. During the Plan period, the supply and distribution systems of both towns were improved and modernised and storage facilities were erected.

2.3.5 Legal, Institutional and Other Problems

Experience with planning and implementing of water projects during the First Plan suggested that both the legislative and the institutional framework were not particularly conducive to a rational utilization of the Island's scarce water resources. The legislation did not enable effective control to be exercised over water extraction nor did it facilitate the planning of water development on a comprehensive or watershed basis. The existence of numerous water rights posed difficult problems. Besides, the system of management and financing of dams was not conducive to a rational utilization and exploitation of water resources.

(*a*) *Legislative Reforms*

The question of water legislation was examined by two U.N. water law specialists(¹), who submitted detailed suggestions for the coding, simplification and improvement of the Island's legislative and organisational set up(²). For various reasons it has not been possible to adopt all the proposals of these experts, but, as already mentioned, the Water Supply (Special Measures) Law was introduced as a stop-gap measure to enable effective control to be exercised over water extraction.

(*b*) *Revisions in the System of Management and Financing of Dams*

In the past, the financing of irrigation projects was done on a contributory basis ; the villages contributed about one-third of the cost (and for this purpose they contracted long-term low-interest loans from the Government Loan Commissioners) and the balance was provided by the Government in the form of a grant. The project became the property of the Irrigation Division of the village ; no direct price was attached to irrigation water. This system was introduced at a time when relatively minor irrigation projects were being implemented most of which were in fact proposed by the villagers themselves. However, with the acceleration of the irrigation programme, the undertaking of major dam projects and the increased realization of the need to intensify the efforts towards ensuring a more rational utilization of the water resources, the old system proved to be inadequate and was revised. The essence of the revision was that in general major irrigation projects would in future be financed entirely by Government and the cost of construction, maintenance and operation (or part thereof) would be recovered over a number of years through the sale of water. The advantages of such a system are : (*a*) it enables Government to decide priorities and implement economically sound projects ; (*b*) it enables Government to influence agricultural development (by charging where necessary different rates for different kinds of crops) ; (*c*) it enables a more efficient and rational use of water. (A corollary to this is a shift towards the production of high value unit crops which fetch higher returns to farmers and the economy as a whole) ; and (*d*) the repayment period is longer and the costs to farmers (in the form of water rates) are more closely matched by the flow of benefits.

In so far as the administration of these projects is concerned, District Water Boards were appointed, under the Government

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(¹) Dr. Krausz and Dr. Caponera.

(²) FAO : " Report on Water Legislation in Cyprus ", 1962.

Waterworks Law with the District Officer as Chairman and the District Agricultural Officer and an Engineer from the Water Development Department as members, which were entrusted with responsibility for the management, operation and maintenance of all Government waterworks within their District.

It is still early to assess the result of these changes. Some initial administrative difficulties have been encountered in the application of the new policy, but there appears to be no doubt that the new approach has been a move in the right direction.

2.3.6 Water Development Expenditure, 1962–1966

Government's water policy and the priorities given to particular fields are reflected in Table 2, which lists development expenditure realised on water during the First Five-Year Plan.

TABLE 2

Water Development Expenditure, 1962–1966

	£000
Irrigation, Drainage and Dams	4,086.2
Town Water Supplies	403.2
Village Water Supplies	2,033.8
Drilling and Prospecting	273.8
Hydrological Research	168.3
Machinery and Equipment	30.1
Workshops	64.0
Other (including Administration)	380.0
Total	7,439.4 (1)

Source : Planning Bureau.

3. Objectives of Water Development Policy in the Second Plan

The objectives of water development policy laid down in the First Plan will be more vigorously pursued during the Second Plan, due regard being had to the work done and the experience gained during the past five-year period. Thus, the central aim of policy will continue to be the best possible conservation and utilization of the Island's scarce water resources on the basis of sound criteria and priorities. More particularly, the aim will be—

(*a*) to achieve effective pumping control and regulation of the main aquifers so as to restore their equilibrium and avert the danger of their depletion and destruction ;

(*b*) to complete the surveys on water resources already undertaken and to use the findings of such surveys in order to formulate an Island-wide Master Plan for water development and utilization ;

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(1) An additional £0.5 million was spent from the Ordinary Budget for Water Development Dept. personnel and various other administrative expenditure and costs incurred in connection with the operation of the Greater Nicosia Water Scheme.

(*c*) to maintain and expand the supplies needed to meet the water requirements for domestic use, industry and agriculture. In this connexion, the supply of water needed for human consumption will receive first priority ;

(*d*) to continue the programme for the building of dams and other storage works, thereby minimizing losses to the sea ;

(*e*) to increase irrigation efficiency through lining of canals, installation of pipelines, land levelling and land consolidation, where necessary, as well as through the propagation of sound irrigation practices ;

(*f*) to keep under continuous attention the economic feasibility and advisability of augmenting the Island's water resources through artificial means such as seawater desalination, artificial rainfall, sewage water recovery and evaporation control ; and

(*g*) to effect further legislative, administrative and organizational changes so as to enable the planning, implementation and management of water development to proceed efficiently and uninterruptedly.

4. Measures to Achieve Objectives during 1967–1971

4.1 Pumping Control and Regulation

The necessity for controlling and regulating groundwater extraction need hardly be over-emphasised. In fact, the depletion of some of the aquifers has already reached such an advanced stage that unless urgent action is taken to remedy the situation and restore the balance, any chance of saving these aquifers will have been lost. The control of groundwater extraction together with the preparation of a master plan for water will thus be the first priorities in the water field during the period of the Second Plan. Indeed, it is hoped that it will be possible to prepare the master plan and to introduce measures enabling effective control of extraction to be exercised during the first two or three years of the Plan.

Control will be achieved through the enforcement of the Water Supply (Special Measures) Law, which, as mentioned elsewhere, gives power to the Government to regulate the water to be extracted from boreholes in the light of the potential of the aquifer and the requirements of crops as established by Government agriculturists and water use experts. At the same time an end will be put to illegal drilling. In parallel, other measures will be taken (recharge works, lining of canals, water use improvement schemes) designed to either replenish the aquifers or economise in the amount of water extracted through proper utilization.

4.2 Preparation of a Master Plan for Water

While the survey of the groundwater and mineral resources (referred to at the beginning of this Chapter is going on, and is expected to be completed in 1969, a second major survey project was recently launched with the object of preparing an Island-wide Master Plan for water development, as well as a more detailed watershed plan for the Paphos region. The experience of the First Five-Year Plan had demonstrated that piecemeal planning and project execution was no more desirable and that progress in staffing and hydrological surveys had proceeded to a point where a comprehensive Master Plan could be prepared. The Water Planning Project, as it is known, has been undertaken with assistance from the United Nations (as a Special Fund Project). The Planning Bureau is the executing agency on behalf of Government. The duration of the Project will be 2½ years and its total cost will exceed £700,000. The Special Fund, through the Food and Agriculture Organization of the U.N., will contribute experts, fellowships for the training of Cypriot counterpart personnel and equipment and supplies worth approximately £338,000. The Government's contribution will be £369,000 and will consist of professional and non-professional staff, land and buildings, office facilities, miscellaneous supplies and equipment and cash for the local operating costs of foreign experts working for the Project. The purpose of the Project is to undertake a national water survey, to conduct detailed feasibility studies and demonstrations in selected watersheds, and to draw up a comprehensive national plan for the controlled use and development of water resources. In particular—

(*a*) The project will undertake a reconnaissance survey of the Island's watersheds. The objective will be to establish an inventory of the existing resources both of underground and surface water. Future water requirements for domestic use, industry and agriculture will be estimated ; in the case of agriculture, this assessment will take into account possible modifications in the pattern of production in favour of high value crops, which make the best use of the land and water resources, having regard to costs of production and marketing possibilities. Studies will also be made on methods of increasing the rate of recharge of groundwater aquifers.

(*b*) The project will also identify for each major watershed possible development projects such as irrigation dams and other water retention structures, and make broad estimates of investment and other costs required and of the benefits to be derived from the various projects.

(*c*) A detailed feasibility survey will be undertaken of selected watersheds in the Paphos area. Aspects to be examined will include hydrology, hydrogeology, soils and crops, as well as existing engineering works, agricultural practices, water rights and land tenure patterns. On the basis of these studies a phased water resource development programme will be prepared for the watersheds. Agronomic trials will be undertaken and a pilot demonstration scheme for irrigated agriculture will be established, on the basis of which recommendations will be drawn up on improved land use and the introduction of advanced crop production techniques.

(*d*) Using the results both of the overall surveys and of the detailed survey and demonstration work in the Paphos area, the Government will be assisted in drawing up a comprehensive water resource development plan—a master plan—to include not only specific investment schemes but also measures for improving extension services, expanding agricultural research facilities, introducing modern water control legislation and establishing the institutional structure necessary to execute co-ordinated water management.

This is one of the most important projects undertaken so far and is expected that its impact on further economic and social development will be considerable.

4.3 Irrigation Projects and Policies

In the planning and implementation of irrigation projects (and more particularly of major dams) the stage has been reached when it is no longer sound policy to proceed in a piece-meal fashion and to embark on projects in the form of individual and isolated schemes. And it is for this reason that the preparation of a Master Plan has been given such a high degree of priority. It is only after the completion of such a plan that it will be possible to consider all the alternatives and to decide on a ranking of projects on the basis of objective economic and other criteria. Therefore, ideally no project should be undertaken until such a plan is ready because, theoretically at least, any project carried out in the absence of such a plan might ultimately be found to be in conflict with what would be justifiable (both from the point of view of location, size and timing) having regard to the findings and recommendations of the Master Plan. However, here, as in other cases, one cannot always attain the ideal. Economic life must go on ; and what is important is to do the best in the circumstances, to adopt policies and undertake action programmes which minimize the risk of serious blunders.

It is against this background that the irrigation programme for the Second Plan was prepared. Three main criteria underlie this programme :

(*a*) Priority has been accorded to projects which started but were not completed during the First Plan. It is important to complete existing projects and to construct the necessary distribution systems so that the water impounded in the dams may be utilized fully and the maximum economic returns be realized soon.

(*b*) The programme of minor irrigation works will be continued. These works comprise small diversion intakes on the hills with lined canals and storage tanks, development of mountain springs, pipelines or pumping schemes in the plains etc. These projects have a low cost and give high returns.

(*c*) There are cases in which emergency recharge measures are necessary. There are also cases of dams (mainly small dams) whose construction is considered to be unlikely to prejudice the formulation of the Master Plan or to adversely affect the optimum development of any particular watershed. The programme has made provision for such dams.

About £5.25 million has been earmarked for irrigation projects, which is by about 30 per cent more than the amount spent during 1962–1966. Out of this provision about £2 million are intended for projects falling under category (*a*) above, *i.e.* continuing projects (Yermasoyia, Mavrokolymbos, Polemidhia, Kalopanayiotis, Argaka–Magounda, Kiti, Syngrassi). For projects under category (*b*) more than £1 million has been earmarked for the five-year period. The balance (over £2 million) is intended for projects falling under category (*c*). These are not major dams (their cost—including the cost of the distribution systems—ranges from £50,000–£300,000) and have been proposed either for recharge, for dometic water supply or for irrigation purposes. The only exceptions are dams in the Paphos watersheds which will be quite sizable, but whose execution cannot take place before the feasibility study of the Paphos watersheds referred to earlier is completed. It is expected, however, that it will be possible for at least one of these dams to be started at the end of the Plan period. Although preliminary studies have been carried out concerning the dam projects falling under this category, the list is still tentative (*a*) because more detailed studies may prove that some of the projects are not justified or (*b*) because, in the meantime, the preparation of the Master Plan may indicate the existence of other more economically justifiable alternatives.

4.4 Domestic Water Supplies

4.4.1 Village Supplies

£700,000 have been earmarked for further improvements and additional supplies and, in particular, for meeting the rising demand for house-to-house distribution. With the rise in the standard of living and following the introduction of electricity and the telephone, house-to-house distribution, which enables the installation of bath and other modern amenities, is becoming a necessity. The target will be to raise average per capita consumption of water from around 20–25 gallons per day to 25–30 gallons.

4.4.2 Town Supplies

The objective will be to maintain and if possible to increase the present average per capita supply of about 50 gallons. No major improvements are planned for Paphos, Kyrenia, Larnaca or Limassol, even though the long-term needs of these towns will be studied and tentative plans to meet them will be prepared. In the case of Famagusta, where the situation is unsatisfactory, a number of solutions have been considered and alternative schemes have been worked out including schemes for conveying water from long distances. These alternatives are being evaluated and a decision will be reached as to the best course of action to follow in the near future. Additional water may also be required for Nicosia mainly because certain existing sources may have to be abandoned due to the fact that they are badly depleted.

The tentative allocation for town water supplies is £1.5 million.

4.5 Other Possibilities

4.5.1 Sea Water Desalination

As already mentioned (see paragraph 2.3.4), feasibility studies on water desalination revealed that the cost of desalinated water would be too high. However, with cost reducing innovations being constantly introduced in water desalination technology, the possibility of desalination becoming an economic proposition in the not too distant future cannot be excluded. The matter will be kept constantly under review.

4.5.2 Artificial Rainfall

Experiments carried out in California, U.S.A., where orographic conditions are similar to the ones prevailing on Troodos, have succeeded in augmenting rainfall by 10–15 per cent. The main method used was the seeding of silver iodide by generators from the ground. The increase in rainfall resulted within a maximum distance of 30 miles from the seeding area.

The importance of artificial rainfall for Cyprus does not only lie in the possibility of augmenting the Island's water resources but particularly in securing such resources during relatively dry years or at particular seasons, when the availability of extra rainfall is decisive for crop yields (*e.g.* cereals). Another interesting application of weather modification techniques is the suppression of hail which, as it is known, inflicts extensive damage to crops in Cyprus.

These techniques will be investigated both with regard to their feasibility in the orographic conditions of Cyprus and their economic implications.

4.6 Legislative, Administrative and Other Institutional Reforms

Review of the water laws and of the administrative and institutional framework affecting water development will be made by the Water Planning Project already discussed.

4.7 Water Development Expenditure, 1967–1971

Development expenditure allocations for water development during the Second Plan are listed in Table 3.

TABLE 3

Water Development Expenditure, 1967–1971

	£ 000
Irrigation, Drainage and Dams	5,250
Village Water Supplies	700
Town Water Supplies	1,500
Drilling and Prospecting	250
Hydrology	100
Surveys and Investigations	100
Other (including Administration, Workshops, Equipment, etc.)	750
Total	8,650

CHAPTER 7

MINING AND QUARRYING

1. Introduction

Mining is one of the oldest industries in Cyprus. For centuries, however, mining operations had ceased and were resumed only as recently as 1914. With the first export shipment in 1923, the industry grew steadily up to the outbreak of the Second World War, the Great Depression having affected it only slightly. The Second World War, however, closed all export markets and brought mining operations to a complete standstill. In the post-war years, the industry recovered and experienced a remarkable pace of expansion. New deposits were discovered and output grew at an unprecedented rate to take advantage of the remunerative commodity prices stimulated by the Korean War. The European boom which followed pushed commodity prices up again to reach their peak in 1956. In the following years prices fell rather abruptly, the total value of exports was reduced with prices sliding downwards faster than the contraction in output, a situation persisting up to the end of 1963 when the international situation enabled prices to soar up again.

2. Importance of Mining to the Economy

2.1 Performance of the Industry during 1962–1966

In the past, the contribution of the industry (mainly of mining) to domestic production, exports, employment and Government revenue was very significant. Thus, in the early 1950's, the share of the industry in Gross Domestic Product was as high as 16.7 per cent (in 1952) ; the industry provided at least 50 per cent of all exports ; mining companies were paying 20–25 per cent of all Government revenues and 55 to 75 per cent of the total income tax ; the industry provided employment to almost 7,000 people. In view of the preponderant place of the industry in the economy, variations in mining activity (resulting from fluctuations in export prices) had widespread repercussions on the whole economy. During the 1950's, with the running down of high-grade ore reserves and the contraction resulting from the fall in international prices, the industry had some difficulty in maintaining its relative position. And with the accelerated growth recorded by other sectors of the economy after Independence, the relative contribution of mining and quarrying registered a decline. Thus, the share of this sector in Gross Domestic Product declined from 16.7 per cent in 1952 to 9.3 per cent in 1961 and 6.9 per cent in 1966 (and is expected to decline further by 1971). Despite this relative decline, however, and predictions to the contrary, the performance of the industry during the period of the First Plan was satisfactory.

Value added at current market prices rose from £6.9 million in 1961 to £9.6 million in 1966. This increase was mainly due to a rise in the world prices of minerals.

Gross Output of Mining and Quarrying, 1962 and 1966

TABLE 1

	1962		1966	
	Quantity (Tons 000)	Value (£ 000)	Quantity (Tons 000)	Value (£ 000)
Metal Mining :				
Iron Pyrites	675.8	1,940	791.6	2,302.0
Cupreous Pyrites	133.5	618	200.0	1,640.0
Copper Cement	1.4	198	14.5	3,811.0
Copper Concentrates	85.6	3,818	58.6	4,022.0
Chromium Ore & Concentrates	5.2	56	10.3	89.0
Total		6,630.0		11,864.0
Stone, Quarrying, Clay & Sand Pits :				
Stones	40.5	40.5	117.3	205.3
Sand, gravel and Aggregate	305.0	210.0	1,201.6	630.8
Havara	55.0	22.0	501.5	75.2
Marble	18.4	32.2	22.2	38.5
Clay	401.4	120.4	366.5	50.5
Limestone	49.7	24.9	60.7	30.4
Total		450.0		1,030.7
Non-metallic Mining & Quarrying :				
Salt	4.1	60.0	4.7	70.5
Gypsum	76.2	38.1	84.9	42.4
Asbestos	20.0	935.8	21.7	966.8
Umber and Orchre	3.0	26.1	7.5	75.0
Total		1,060.0		1,154.7
Total Mining and Quarrying		8,140.0		14,049.4

Source : Statistics and Research Department, Ministry of Finance, and Planning Bureau.

As will be seen from Table 1, the volume of output increased in all cases with the exception of cupreous concentrates, where there was in fact a decline. Quarrying operations encouraged mainly by the heavy infrastructural programme of the Government expanded significantly. At the same time the prices of minerals were much more favourable as compared with 1961. Thus, the prices of copper cement rose by 225 per cent, of cupreous concentrates by 186 per cent, of cupreous pyrites by 126 per cent, while the prices of iron pyrites maintained their 1961 level.

2.2 Exports and Balance of Payments

Mineral exports have been, and still are, of crucial importance as a foreign exchange earner. Traditionally, they led the export list contributing over 50 per cent to total merchandise exports.

However, with the very rapid growth in agricultural exports during the First Plan, the share of minerals declined from 53 per cent in 1961 to about 44 per cent in 1966. But in absolute terms, export earnings from minerals rose from £8.4 million in 1961 to £12.2 million in 1966. As Table 2 indicates copper cement, cupreous concentrates and cupreous pyrites have been mainly responsible for this increase.

TABLE 2 **Minerals Exported, 1961 and 1966**

Items	1961		1966	
	Quantity (Tons)	Value (£ 000)	Quantity (Tons)	Value (£ 000)
Asbestos	15,805	925	18,888	826
Copper Cement..	1,759	205	14,545	3,811
Chrome Ore	18,820	191	2,501	21
Cupreous Concentrates	101,585	3,736	57,755	3,964
Cupreous Pyrites	138,477	907	161,653	1,325
Iron Pyrites	822,263	2,363	735,022	2,137
Gypsum Calcined	1,830	6	1,196	5
Gypsum	24,437	25	55,650	49
Terra Umbra	4,252	53	5,346	67
Other	308	6	4,442	20
Total		8,417		12,225

Source : Imports and Exports Statistics 1961 and 1966, Statistics and Research Department, Ministry of Finance.

2.3 Establishments and Employment

Table 3 illustrates the structure and employment situation in the Mining and Quarrying Industry since 1954.

TABLE 3 **Establishments and Employment, 1954, 1962 and 1966**

	Year	Metal Mining	Stone Quarrying	Non-metallic Mining & Quarrying	Total Mining & Quarrying
Establishments	1954	11	271	80	362
	1962	10	264	90	364
	1966	10	125	56	191
Persons engaged	1954	4,114	611	1,991	6,716
	1962	3,909	519	1,009	5,437
	1966	4,072	357	643	5,072

Source : Industrial Censuses of 1954 and 1962 ; and 1966 Industrial Survey by the Statistics and Research Department.

The major group of metal mining comprises 10 large establishments belonging to three enterprises. The main metals mined are cupreous pyrites, iron pyrites and chromium ore. Some are treated locally by bleaching, flotation and precipitation of copper ; copper concentrates of 22 per cent are obtained, as well as some quantities of cement copper of 77 per cent concentrates.

Fall in employment in metal mining is the result of contraction in operations, of increased mechanization and of a change from underground mining to open cast mining.

Quarrying covers establishments engaged in stone and sand gravel, havara, marble, clay and limestone quarrying. Out of 125 establishments in 1966 only 20 were of any real size; they accounted for nearly 60 per cent of the output. Fall in employment was accompanied by an increase in ouput and increasing mechanization and productivity.

Non-metallic mining includes gypsum mining, asbestos mining, salt and earth colours. Out of 56 establishments in 1966 only 12 were of any size and accounted for 75 per cent of total output.

3. Exploration for New Ore Deposits

In 1960, the U.N. Economic Survey Mission(¹) made the following comment on the future of the industry :—

> " It is possible to arrive at the conclusion that the mining industry has passed its peak, and that in the future the export of minerals as well as the total revenue from mining activity will decline. Any such gloomy picture tells only part of the story. The trend of events can be changed by the discovery of new ore bodies, and the possibilities of Cyprus have not yet been fully explored."

To facilitate exploration of these possibilities and to enable a revitalization of the mining industry by the investment of additional capital, tax and other incentives were provided to mining companies. But the most important measure taken was the initiation in 1963 of a five-year project known as the Groundwater and Mineral Resources Survey Project. This was undertaken with U.N. assistance as a Special Fund project(²). Under the relevant agreement between the Government of Cyprus and the U.N. Special Fund, investigations were to be carried out with the object of assessing mineral resources in promising areas, especially around the igneous rock massif of Troodos. These investigations were to be aided by geological and geophysical exploration and drilling; appropriate geological maps were to be prepared; and the staff of the Geological Survey Department was to be strengthened and trained in the use of modern investigation techniques.

By the end of 1966 an area of about 80 square miles had been investigated and explored for minerals and a number of boreholes of a total footage of 30,694 were drilled.

(¹) U.N. " Cyprus—Suggestions for a Development Programme " (page 39).

(²) The groundwater survey part is described in Chapter 6 (Water Resources).

Geological mapping of an area of 659 square miles was carried out and geophysical exploration for minerals over an area of 62 square miles was conducted.

No spectacular results have so far been obtained, although in some areas there are signs that promising results may be coming in.

4. Prospects during 1967–1971

In view of the uncertainty surrounding international prices and the availability of resources it is difficult to accurately forecast the evolution of mining output in 1971. What is perhaps certain, is that it will not be possible by then to exploit any ore deposits which may in the meantime be discovered.

The most probable situation seems to be that the volume of mining output will remain approximately at the same level as in 1966 (or probably decline slightly). On the other hand, the prospects for quarrying are quite good because of the high volume of construction activity envisaged. Thus, the contribution of mining and quarrying to Gross Domestic Product is forecast to remain at £9.6 million at constant, 1966 prices.

More particularly the prospects for mining and quarrying are as follows :—

4.1 Production

(*a*) *Metal Mining*

Some reduction in the output of particular ores, *e.g.* iron pyrites, is not excluded, although the overall gross output of this category is not expected to be significantly affected.

(*b*) *Non-metallic Mining*

Asbestos : The market for asbestos is fairly stable and reserves have a life of more than a hundred years, if exploited at the present rate. Present annual production of about 22,000 tons is expected to be maintained in 1971. Investigations for the establishment of a second asbestos mine have been going on for some time and prospects appear to be good. It is not, however, anticipated that production from a new asbestos mine will commence during the Plan period.

Gypsum : From studies made, it appears that gypsum production could increase from about 85,000 tons in 1966 to 130,000 tons in 1971.

(*c*) *Quarrying*

The production of stones, sand, gravel and havara will be determined by the road construction programme and the building activity in general. As it has already been suggested the prospects of this group during the Second Plan period are good.

Similarly the production of ornamental slaps of polished limestone of various dimensions (marble) has good prospects for the future. The production of clay is expected to increase mainly because of the increase in cement production and the increased requirements of the structural clay industry.

4.2 Exports

Because of their predominant position in the general trade, minerals are likely to create structural problems, as it happened in the post-1957 period when international prices were disturbed. At present, for various reasons, export prices are high but this may not continue. With conditions of relative stability in the export market, asbestos exports are not expected to present problems. In the case of gypsum, the volume of exports is likely to be maintained at a high level during the Plan period.

Overall export earnings from minerals are anticipated to decline from £12.2 million in 1966 to about £11.7 million in 1971, primarily because of a possible drop in the world prices of copper.

4.3 Investment

Investment in this sector during the First Plan period amounted to about £4.3 million at constant, 1966 prices. The estimated investment in the industry during the Second Five-Year Plan will be around £5 million. The programme of geological and geophysical surveys and mineral exploration will be continued after the existing Special Fund assisted project comes to an end. A sum of £0.5 million has been earmarked from Government development expenditure allocations for this purpose.

4.4 Employment

It is anticipated that there will be a small decline in employment resulting from the shift from underground mining to open cast mining, the decline in production and the increase in productivity. On the other hand, quarrying is expected to experience a healthy expansion and a 30 per cent increase in employment is forecast. All in all, it is estimated that employment in this sector will be about 5,000 in 1971.

CHAPTER 8

MANUFACTURING INDUSTRY

1. Introduction

Until recent years, there was very little manufacturing industry in Cyprus and even by the time of Independence the contribution of this sector to the Island's production was small and much below what was warranted by the size of the country and the level of its income. The really sizable industrial units organized on modern factory lines were to be found among industries processing locally produced raw materials (wineries, fruit canning, cement) or "market-based" industries (footwear, tobacco, bottling plants). Many factors can be held responsible for this stagnation : the limited size of the market ; lack of the necessary infrastructure which would create sufficient external economies ; the lack of adequate encouragement and incentives ; the shortage of long-term finance and the absence of appropriate institutions for the channelling of such finance ; the development of a lucrative import trade (which *inter alia* had the effect of conditioning the Cypriot consumer to foreign goods) and the existence of opportunities for other more remunerative forms of investment (*e.g.* in real estate). Thus, at the time of Independence, the manufacturing sector, like agriculture, was characterized by the predominance of the small firm. With few exceptions firms either imported their raw material requirements or bought them from agriculture. There was little interdependence within the industrial sector. Again, as in the case of agriculture, with few exceptions, the standards of technology, management and skills were in general low and so was productivity. These factors combined to keep costs of production high and to make Cyprus manufactured goods uncompetitive.

2. Progress during the First Plan

During the period of the First Plan, the contribution (value added) of manufacturing to Gross Domestic Product increased from £13.2 million in 1961 to £16.8 million in 1966 (at constant, 1966 prices). This represents an average annual rate of growth of 4.9 per cent and, although it is below the overall growth of the economy, it is a creditable performance if one takes into account the barriers which had (and still have) to be overcome in the development of this sector.

One of the basic objectives of the Government in the First Plan was the creation of suitable conditions for the fostering of private initiative by carrying out the necessary infrastructural and other works. Another objective was to establish an institution to provide long-term finance. Viability would be the basic criteria for the promotion of industries.

In line with this policy, tariff changes were effected designed to provide incentives for the establishment and expansion of viable industries. Industrial research was undertaken and in the light of the results of such research policies of encouragement and promotion were formulated and implemented. A Development Bank (the Cyprus Development Corporation) was established to offer long-term credit and technical assistance to industry. New methods of industrial development were tried : thus, an industrial estate was established in Nicosia to offer industrialists factory sites for lease at reasonable rentals. Plans were prepared for the establishment of similar estates in Limassol and Larnaca.

In its efforts to promote exports of manufactured products, the Government participated regularly in international fairs and amended the Customs Drawback regulations, thus enabling manufacturers to claim refund of import duties paid on materials embodied in exported goods. Cottage Industry was also assisted in an effort to create employment opportunities in rural areas. Various handicraft activities were encouraged and two Handicraft Organizations were established.

To raise the level of skills of workmen and supervisory personnel, a Productivity Centre was established. To complement the technical education system an Apprenticeship scheme was also introduced to train on the job those who cannot attend technical schools. The full impact of these measures is being felt gradually and is expected to gain momentum during the Second Five-Year Plan period.

Details regarding the growth of manufacturing industry between 1961 and 1966 are given in Table 1.

Net Output of Cyprus Manufacturing Industry, 1961 and 1966 (1)

TABLE 1 (*At Current Prices—£ 000*)

Code No.		Net Output		Index 1961–66	Annual Rate of Change
		1961	1966		
20	Food	1,719.3	2,485.6	144.6	7.7
21	Beverage	2,221.0	3,083.9	138.9	6.8
22	Tobacco	414.3	371.9	89.8	—2.1
23	Textiles	125.1	279.7	223.6	17.5
24	Footwear & Clothing ..	2,099.7	2,388.2	113.7	2.6
25	Wood and Cork	299.9	305.6	101.9	0.4
26	Furniture	476.6	671.8	141.0	7.1
27	Paper and Paper Products.	4.4	635.2	146.4	7.9
28	Printing	429.5			
29	Leather and Fur	66.1	110.4	167.0	10.8
30	Rubber	94.2	117.0	124.2	4.4
31	Chemicals	218.9	495.0	226.1	17.7
33	Non-metallic Minerals ..	962.1	1,207.9	125.5	4.6
35	Metal Products	572.1	746.0	130.4	5.5
36	Machinery excl. Electrical	247.4	433.3	175.1	11.8
37	Manufacture of Electrical Machinery	37.6	110.3	293.4	24.0
38	Transport Equipment ..	725.2	932.9	128.6	5.2
39	Miscellaneous	190.4	290.2	152.4	8.8
	Total	10,903.8	14,664.9	134.5	6.1

Source : Planning Bureau and Statistics and Research Department.

(1) Excluding cottage industry.

Food Industry

This industry expanded by an average rate of growth of 7.7 per cent per annum with net output rising from £1.7 million to nearly £2.5 million. The meat industry, in particular, expanded fast under the impetus of Government's promotional efforts. Milk bottling and dairy production expanded under the stimulus of the demand of foreign residents and the opening of export outlets, but this expansion is still slower than the increase in milk supplies. The canning sector, encouraged by the growth of domestic raw materials and the favourable export demand, grew at a fast pace. The cheese, biscuits and flour milling industries were strengthened through the establishment of new factories ; other industries implemented a rationalization of operations programme. Exports expanded by 12.8 per cent per annum.

Beverage Industry

A new project strengthened further this well-organized industry. Expansion was spectacular with exports rising from £816,000 in 1961 to £2,246,000 in 1966.

Clothing and Footwear

There was an extensive rationalization of existing industries and new clothing, hosiery and knitwear factories were established. Recently the industry has been investigating export possibilities with encouraging results.

Chemicals and Non-Metallic Minerals

Important developments took place in this sector. New soap, paints, matches, lime and cement factories were established.

3. Present Situation

The present position of manufacturing industry may be summarised as follows :

(*a*) As Table 2 shows 13.7 per cent of the gainfully employed population is engaged in manufacturing industry. In 1966, exports of manufactured goods amounted to 17.3 per cent of total domestic exports, a large proportion of which consisted of semi-processed agricultural products. The share of Manufacturing to Gross Domestic Product is 12.2 per cent.

(*b*) There is still little inter-industry dependence and heavy reliance on imported raw materials.

(*c*) The industry is still dominated by the small productive unit, averaging only 2.6 persons per establishment. In 1962, 22 per cent of manufacturing output was produced by 51 per cent of the manufacturing labour force engaged by 11,085 establishments employing under five persons each.

Contribution of Manufacturing to Gross Domestic Product, Employment and Exports in 1966

TABLE 2

	Total (1)	Manufacturing Industry (2)	Percentage of 2 : 1 (3)
Value added (£mln.)	138.2	16.8	12.2
Gainfully employed (000's) ..	228.6	31.2	13.7
Exports (£mln.)	27.2(1)	4.7	17.3

Source : Elaborated by the Planning Bureau on the basis of Economic Report and Import and Exports Publications of the Statistics and Research Department.

(*d*) The structure of output is dominated by sectors whose expansion in the future may not be very rapid.

(*e*) There are indications that there is substantial excess capacity in the industry. This situation increases costs.

(*f*) There is a shortage of skills, both managerial and technical, in certain sectors and this impedes productivity improvements.

(*g*) A number of industries are reported to be facing a shortage of working capital.

(*h*) Many of the industries are still inward-looking with little export orientation.

4. Objectives of Industrial Development Policy

4.1 General Objectives and Strategy

During the next five-year period manufacturing must become one of the cornerstones of the development effort. The need to restructure the economy and make it less dependent on external factors will necessitate the acceleration of the pace of domestic production ; and this problem is becoming more acute with the reduction of military Base and similar expenditure. Manufacturing will be the medium through which a new built-in stability will be injected into the Cyprus economy. More specifically, with industrial development it is expected to (*a*) improve the balance of payments through import substitution and exports of manufactured goods ; (*b*) create employment opportunities ; and (*c*) make possible the utilization of local raw materials which at present are either not utilized sufficiently or are being exported in a raw material state.

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(1) Domestic Exports.

In the particular circumstances of the Cyprus economy, the policy of import substitution followed during the First Plan period seems to have been an acceptable basis of development. It is felt, however, that this policy can no longer satisfy the long-term needs of the economy and although import substitution will be encouraged, it is proposed during the Second Plan period gradually to place a heavier emphasis on export promotion. The aim will be to overcome the disadvantage of scale by extending the national market to broader horizons thus eliminating one of the biggest obstacles to development. Furthermore, to offset the technological handicap and benefit from international expertise and know-how, cooperation with foreign firms will be promoted. Cyprus appears to possess a good locational advantage which should be more fully exploited. Joint ventures could be encouraged and Cyprus could be used as a base for the manufacture and export of goods to neighbouring or more distant countries.

4.2 Plan Targets : Share of Manufacturing in Gross Domestic Product

One of the primary objectives of this Plan is to increase the share of manufacturing to Gross Domestic Product from 12.2 per cent in 1966 to about 14 per cent in 1971. Achievement of this target will necessitate an average annual rate of growth of manufacturing of 10 per cent. Such a rate of growth is an ambitious but necessary one if the efforts to restructure the economy are to be successful.

Detailed sectoral studies confirm that the 10 per cent rate of growth is both feasible and well within the potential of the economy. The results of the studies are presented in Table 3.

Value Added by Manufacturing, 1966 and 1971

(*At Constant*, 1966 *Prices*—£mln.)

TABLE 3

	1966	1971
Food, Beverage and Tobacco	5.9	8.4
Metal and Allied Industries	2.2	3.8
Other Industries	6.6	11.8
Total	14.7	24.0
Cottage Industry	2.1	3.0
Total Manufacturing	16.8	27.0

Source : Planning Bureau and Ministry of Commerce and Industry.

The above projections are based on certain assumptions on which their feasibility depends. These are : (*a*) that the economy as a whole will grow at about 7 per cent per annum ; and (*b*) that certain policy measures will be taken and a favourable economic climate will be maintained. But ultimately the attainment of the targets and objectives of the Plan will largely depend on the cooperation and the willingness of the private sector to respond and exploit the opportunities created.

4.3 Gross Output by Group of Industries

The production prospects of particular groups of industries are indicated in Table 4. They are the result of detailed studies carried out by the Planning Bureau in cooperation with the Ministry of Commerce and Industry.

Gross Output of Manufacturing Industry by Major Groups, 1962, 1966 and 1971

TABLE 4 (£ mln.)

	1962(2)	1966	1971
Food, Beverages and Tobacco	15.8	23.2	30.2
Textiles, Footwear and Clothing	5.0	5.9	8.0
Wood and Furniture	1.7	2.4	3.6
Paper and Printing	0.9	1.1	1.8
Leather	0.2	0.4	0.6
Rubber and Chemicals	0.8	1.3	7.4
Non-metallic Minerals	1.7	2.0	3.6
Metal Industries	2.6	3.6	6.6
Miscellaneous Other Industries	0.5	0.8	1.5
Total Manufacturing (1)	29.2	40.7	63.3

Sources : Planning Bureau.
Ministry of Commerce and Industry.
Statistics and Research Department.

The fastest growing groups are likely to be those of the chemical and petroleum products. This is because of their present low level of development and the expected implementation of two major industrial projects, the oil refinery and the fertilizer plant. The " Miscellaneous " group is also anticipated to expand at a fast pace because of the expected development of the plastics industry.

Metal and non-metallic mineral industries are likely to attain a high average rate of growth because of the favourable demand conditions and the expected materialization of some important major projects. The food industries group also is expected to make a satisfactory progress having regard to the slow rate of growth of domestic demand. Some new projects are likely to achieve both import substitution and exports. On the other hand, it is anticipated that some of the existing industries will be able to offset the slow growing internal demand for their products by taking advantage of export opportunities.

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(1) Excluding Cottage Industry.

(2) 1962 was preferred to 1961 as a base year because in that year an Industrial Census was taken.

4.4 New Major Projects

The importance of undertaking new projects need hardly be stressed. As Table 5 indicates, it is estimated that about 30 per cent of the additional value added during the period of the Second Plan will be contributed by new projects.

Major New Projects by Group of Industries

TABLE 5

	Gross Output (£mln.) 1971	Value Added (£mln.) 1971	Employment (No.)	Investment (£mln.) (1967–71)
Food Industry	0.5	0.2	134	0.2
Wood Products, (incl. Textiles) ..	0.5[1]	0.2[1]	74	0.7
Paper Products ..	0.3	0.1	70	0.3
Chemicals	5.2	1.8	190	4.5
Non-metallic Minerals	0.6	0.3	104	0.6
Metal Industries ..	1.2	0.3	150	0.7
Other Industries ..	0.3	0.1	32	0.1

Source : Planning Bureau.
Ministry of Commerce and Industry.

Most of the new projects are capital intensive. They are expected to contribute substantially to the utilization of local raw materials and to the export promotion and import substitution drive.

Some of the major industrial projects, the implementation of which has either been decided upon or which preliminary studies indicate that they are likely to materialize during the Second Plan period, include : Meat canning, fertilizer production, sawmilling, cement asbestos pipes, textiles and oil refining. Projects which are still regarded as marginal, but which warrant further careful study, are : a margarine plant, a tannery, a tin container factory, a steel rolling mill, a building hardware factory, a glass factory. The feasibility of these projects will be re-examined during the Plan period.

Because of the implementation of a number of major new projects, which are expected to utilize modern and up-to-date methods of production, the value added/gross output ratio is likely to improve from 36 per cent in 1966 to 38 per cent in 1971. However, the expected improvement in the ratio is not sufficiently satisfactory and efforts will have to be made to improve it. At the same time, some sectors of the industry, particularly those using semi-finished goods as raw materials, might be encouraged to engage in more complete manufacturing operations.

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(1) Output and value added of " Wood Products " industries only.

4.5 Shift in Output Structure

Table 6 illustrates the anticipated shifts in the structure of output during 1967–71, as well as those which have taken place during the First Plan.

Percentage Share of Particular Groups in Total Manufacturing Value Added, 1962, 1966 and 1971

TABLE 6

	1962	1966	1971
A.—Food, Beverage and Tobacco	37.1	40.5	35.3
B.—Textiles, Footwear and Clothing ..	20.6	18.2	15.2
Group I (A+B)	57.7	58.7	50.5
C.—Wood and Furniture	7.5	6.7	5.9
D.—Paper and Printing	4.2	4.3	4.1
E.—Leather	0.6	0.8	0.7
Group II (C+D+E) ..	12.3	11.8	10.7
F.—Rubber and Chemicals	3.4	4.2	11.9
G.—Non-metallic Mineral Products ..	10.4	8.2	8.9
H.—Metal and Allied Products	14.9	15.1	15.9
I —Other	1.3	2.0	2.1
Group III (F+G+H+I)	30.0	29.5	38.8
Total Manufacturing	100.0	100.0	100.0

Source : Planning Bureau.

4.6 The Size of Establishments

Implementation of the development programme is likely to bring about a substantial shift in the size structure of industry to the benefit of the overall efficiency of the economy. The creation of larger-size industrial units will be encouraged, because, among other things, the export of manufactured goods on any appreciable scale can only be undertaken by such units. As Table 7 indicates, the significance of the small establishments is likely to become less prominent in the future.

Percentage Share of Small and Large Establishments in Gross Output, Value Added and Employment, 1962, 1966 and 1971

TABLE 7

	Gross Output			Value Added			Employment		
	1962	1966	1971	1962	1966	1971	1962	1966	1971
Small Establishments (¹) ..	26.5	24.8	16.0	25.7	22.1	14.0	56.3	51.4	45.0
Large Establishments	73.5	75.2	84.0	74.3	77.9	86.0	43.7	48.6	55.0
Total Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources : Department of Statistics and Research and Planning Bureau.

(¹) Establishments employing under 5 persons.

4.7 Exports

Heavy emphasis is placed on exports in this Plan. In the case of exports originating in manufacturing industry, the target is to raise earnings from £4.7 million in 1966 to £8.2 million in 1971. (Table 8).

Exports of Manufactured Goods, 1966 and 1971
(£mln.)

TABLE 8

	1966	1971
Food and Beverages	4.0	5.9
Textiles, Clothing and Footwear	0.1	0.6
Metal and Related Products	—	0.5
Other	0.6	1.2
Total	4.7	8.2

Sources : Planning Bureau.
Ministry of Commerce and Industry.

Most of the exports will comprise processed or semi-processed agricultural products, but a number of other industrial enterprises are expected to venture into the export market.

The export potentialities of the industry will be fully explored and Government will encourage and support the export drive. Attention will be directed to the question of raising the quality of the products and the development of certain specialities which fetch good prices abroad. The following products are either already exported or apparently have an export potential : wines and spirits, canned fruit and vegetables, fruit juices, confectionery, macaroni, halloumi, meat products, olive oil, textiles (incl. clothing), footwear, handicrafts, matches, carob gum, hides and skins, paper products, steel pipes, plastic goods, cosmetics, soap, furniture.

This list is not exhaustive.

5. Means for Attaining Plan Targets

5.1 Investment Requirements

It has been estimated that the fixed investment requirements in the manufacturing sector will be about £27 million. This is an ambitious investment target, but it is considered to be a feasible and desirable target to attain having regard to the increasing role which manufacturing has to play in the economy. Moreover, as already mentioned, a number of major capital intensive projects are expected to materialize during the Plan period.

5.2 Government Investment and Other Development Expenditure

Development expenditure by the public sector during the Second Plan period will be more than doubled as compared with the First Plan. As already announced, the Government has entered into an agreement with oil companies in Cyprus for the establishment of an oil refinery designed to meet the needs of the Island in petroleum products. Government has an option to participate in this project. The refinery is expected to go on stream early in 1970.

Government may also participate in a sawmilling and timber utilization project, whose objective would be to use forest logs for the manufacture of good quality timber to satisfy some of the requirements of the construction industry and the requirements of the mining industry. More specifically, the products of the sawmill factory are expected to replace redwood imports, to substitute some whitewood used for concrete shutterings and to meet the requirements of the mining industry. A feasibility study on the project was completed some time ago. The institutional and organizational arrangements are now being worked out.

The institution of industrial estates will be continued. Various types of estates will be established and the provision for this purpose will be stepped up ; and so will expenditure on the encouragement of cottage industry, industrial promotion, industrial research and feasibility studies. Details of development expenditure during the Second Plan are given in Table 9.

Government Investment and Other Development Expenditure, 1967–1971 (£mln.)

TABLE 9

Oil Refinery Project	1.60
Other Industrial Projects	0.12
Industrial Estates	0.50
Cottage Industry	0.10
Other (incl. Industrial Promotion & Research and Administration)	0.18
Total	2.50

5.3 Employment and Productivity

Employment requirements entailed by the output and investment targets will rise from 31,200 in 1966 to 39,000 in 1971. In parallel to the expansion in employment, labour productivity will also be rising. In fact it is expected that it will be rising at a faster rate than in the previous five-year period primarily because most of the new projects will be of a " capital-intensive " nature.

5.4 Industrial Development : Measures and Policies

5.4.1 General

Local manufacturing industry has demonstrated that it can produce articles in no way inferior to imported goods. Cyprus is perhaps more fortunate than a number of other developing countries in that it has a dynamic class of entrepreneurs, a fairly high level of literacy, and a mobile and adaptable labour force. Moreover, in view of its location, Cyprus could aim at securing " licensing " arrangements with foreign industrial firms to manufacture products for export. For the same purpose, assemblying plants might be set up as well as " free zones " for entrepot trade.

Government will continue to pursue an active policy of encouragement and will create external economies which raise the rates of returns to levels which would attract private investment. Although the role of Government will continue to be one of non-interference in the sphere of the private sector, Government will not hesitate to intervene when private initiative fails to take up the opportunities.

5.4.2 Conditions of Competition

Government will endeavour to maintain a competitive climate within which industrial enterprises will operate. Restrictive practices and other obstacles to the normal competitive process will be removed.

5.4.3 Tariff Protection

It is not in the long-term economic advantage of Cyprus to create a closed economy and to encourage industry behind high tariff walls. A high tariff wall around a small market like that of Cyprus will only breed inefficiency, raise costs and operate at the expense of the consumer. Government will, therefore, continue to pursue a liberal trade policy, but this should not preclude some degree of protection in cases where the industry has prospects of developing into a viable industry both from the point of view of quality and price. As a matter of general policy a tariff adjustment would only be justified if it is necessary : (*a*) In order to protect a new viable industry for a limited number of years so as to enable it to reach maturity. (This is the " infant industry " argument which might justify protection for industries requiring a period of protected adolescence before they can undertake to meet foreign competition, especially, where the competing imported article has a prestige built on many years of habitual usage). (*b*) In order to protect industries in the process of a rationalization or modernization programme. (*c*) For fiscal and balance of payments reasons.

But in all these cases a careful study of each individual case is necessary in order to establish whether the industry concerned has a good chance of developing into a competitive, viable industry. At the same time the Ministry of Commerce and Industry will carry out periodical reviews in order to evaluate the results and to ensure that protection will not be a price-supporting measure resulting in cost to the consumer without a corresponding benefit to industry.

5.4.4 Infrastructure

Infrastructural development, which provides external economies conducive to industrial growth, will be continued. More particularly, it is proposed to continue the policy of establishing industrial estates and also to establish free zone/industrial estates.

(i) *Industrial Estates.* It is proposed to extend the institution of industrial estates to Limassol and Larnaca. Government will acquire land, invest in basic facilities and lease the sites to industrialists at a rental. The advantages of this method of promoting industrial development are : It influences industrial location, promotes inter-industry dependence, offers land at reasonable rentals for industrial development and makes possible certain external economies.

It is intended, however, during the Second Plan period to proceed not only with the provision of basic facilities, but also to establish on the estate advance factory buildings to be rented to industrialists, especially the small-scale operators.

The objectives during the Five-Year Plan will be : (*a*) The completion of the Nicosia Industrial Estate ; (*b*) the establishment of an industrial estate in Limassol ; and (*c*) the establishment of an industrial estate in Larnaca.

A provision of £0.5 million has been earmarked for this project.

(ii) *Free Zone/Industrial Estates.* In line with the policy of encouraging export industries it is intended to establish free port zones in which industry will operate without the usual Customs formalities. It is expected that this measure will stimulate the establishment of local industries as well as joint ventures with foreign companies.

A feasibility study has already been prepared which indicates that an investment of about £300,000 will be needed for the establishment of a port-based and an airport-based free zone/industrial estate. The required funds for this purpose have been provided under Ports and Airports (see Chapter on Transport and Communications).

5.4.5 Investment Incentives

The Government has for some time been considering the advisability of introducing fiscal incentives designed to encourage investment and industrial development. The existing machinery of the Income Tax Law will be used for the introduction of a number of such incentives while the burden of direct taxation will also be reduced. In this connection reference is invited to Chapter 4B.

5.4.6 Foreign Investment

The Government will continue to encourage the inflow of foreign capital and "know-how" for the purpose of developing and establishing projects and meeting needs which cannot be met from local sources. In this connection, reference is invited again to Chapter 4B.

5.4.7 Quality Control and Standards Institute

Consideration will be given to the setting up of such an Institute to assist local industries in their efforts to improve the quality and standard of their products. This appears to be an urgently needed innovation which is expected to enhance the ability of the local industry to break through both in the local and foreign markets.

5.4.8 Establishment of an Export Advisory Council

As stated in the Chapter on Trade, it is proposed to set up an Export Advisory Council composed of representatives from the Government and the private sector which, *inter alia*, will advise on export markets, the coordination of the publicity effort and on measures for promoting the exports of manufactured and other goods.

5.4.9 Training of Manpower

Government will continue its efforts to ensure that the required skills are made available to the Industry. In pursuit of this policy—

(*a*) Technical education will be further expanded.

(*b*) The Government will continue to give support to the Cyprus Productivity Centre which is now fully staffed. With fully equipped workshops this Centre is expected to play a more prominent role in upgrading skills.

(*c*) Government proposes to implement more widely the Apprenticeship scheme which will offer training on the job to those who cannot attend technical schools. The scheme will be put on a more permanent basis.

(*d*) The Higher Technical Institute, described elsewhere in this Plan, is expected to supply industry with badly needed higher level technicians. The impact of the Project however will not be fully felt during the present Plan period.

(*e*) Training within industry schemes will be encouraged.

5.4.10 Supply of Capital

(i) *Fixed Capital.* The main sources of capital for investment will be re-investment of profits and self-financing, the Cyprus Development Corporation Ltd. and the Commercial Banks.

(ii) *Working Capital.* Reports that shortage of working capital often impedes the sale of manufactured goods both in the local and foreign markets will be examined and, if necessary, workable arrangements will be sought with the banking system for removing this bottleneck.

(In this connection reference is also invited to Chapter 4G).

5.4.11 Research Programme

The industrial research programme will be intensified. It will include : (*a*) feasibility studies designed to identify investment opportunities ; (*b*) productivity studies on selected industries ; (*c*) research on general problems of industrial development ; (*d*) research for export markets ; and (*e*) promotional campaigns to disseminate the findings of such research and to bring industrial opportunities to the notice of local and foreign potential investors.

6. Problems and Prospects of Particular Categories of Industries

As indicated in paragraph 4.2, the Industrial Plan has been prepared after a careful analysis and evaluation had been made of the prospects of the various industries or groups of industries. For a number of industrial projects detailed feasibility studies had been made and the findings of such studies were used in making the projections. At the same time it was possible to identify a number of problems and bottlenecks affecting various categories of industries. These details have not been included in the present document, but it is proposed that in due course the Ministry of Commerce and Industry will issue a separate publication on the problems and prospects of particular industries for the guidance of industrialists, present and prospective.

CHAPTER 9

ELECTRICITY

1. Importance of Electricity

1.1 Electric power is one of the prerequisites for economic and social development and this is particularly so in the case of Cyprus where electricity is practically the only kind of energy available. Electricity development stimulates economic activity and enables the attainment of higher levels of efficiency. There is thus a close relationship between economic growth and electric power development.

1.2 In Cyprus, electricity generation and distribution is in the hands of the Electricity Authority of Cyprus, a public corporation established in 1952 under the Electricity Development Law. The Authority operates two generating stations, at Dhekelia and Moni ; and a power grid brings power to the central regions and coastal towns. In addition, there are a number of diesel power stations, which are maintained as stand-by, as well as some private independent small power plants.

2. Progress during the First Plan

2.1 During the period of the First Five-Year Plan, the Electricity Authority embarked on an ambitious programme which was financed to a large extent by the International Bank for Reconstruction and Development. The programme was aimed at the expansion of generating capacity, the acceleration of the pace of rural electrification and the improvement of urban supplies. The implementation of the programme has been highly successful. Overall capacity expanded by 106 per cent. The capacity of the Dhekelia Power Station was expanded to 84 M.W. through the commissioning of a 14 M.W. turbo-alternator in 1963 to meet the increased demand pending the completion of the main Power Station at Moni. The first stage of this project was completed in 1966 with the commissioning of two 30 M.W. Units. The Electricity Authority of Cyprus has expanded its capacity from 70 M.W. in 1961 to 144 M.W. in 1966.

2.2 During the same period, the production of electricity expanded at a fast pace (recording an average annual rate of growth of 8.4 per cent), i.e. from 232.6 million kwh in 1961 to 348.9 million kwh in 1966.

Spectacular progress was made in the rural electrification programme. Two hundred and twenty villages were connected with electricity for the first time bringing the total number of villages on supply by the end of 1966 to 316 as compared with 96 at the end of 1961. Services to urban consumers were also substantially improved.

2.3 Table 1 illustrates the development of electricity consumption since 1961 by major class of consumer. It will be observed that consumption of electricity expanded by an average annual rate of growth of 6.2 per cent. Two factors conceal the real growth of consumption during the period under review ; firstly, the unrecorded consumption of the Turkish Cypriots ; and, secondly, the change in the meter reading cycle in 1966.

Consumption of Electricity, 1961 and 1966
(In Thousand Units or kwh)

TABLE 1

	1961	1966	Index 1961 =100	Annual Rate of Growth
Domestic	49,572	65,569	132.3	5.8
Commercial	76,541	104,315	136.3	6.4
Industrial	56,968	74,982	131.6	5.7
Irrigation	6,957	9,048	130.1	5.4
Street Lighting	4,574	9,020	197.2	14.5
Total Consumption	194,612	262,934	135.1	6.2

Source : Electricity Authority of Cyprus.

2.4 In 1966, the contribution of electricity to the Gross Domestic Product (at factor cost) was 1.5 per cent.

3. The Second Plan—Objectives and Targets

3.1 Generation, Transmission and Distribution

During the Second Plan period, generating capacity will be further expanded and the transmission and distribution systems will be reinforced and extended as follows :—

(*a*) *Generation*

The existing Moni Power Station will be extended by the addition of one 30 M.W. generating unit, associated steam generating plant and ancillary equipment. Corresponding extensions will also be made to the existing transformer capacity and switchgear.

(*b*) *Transmission*

A new double circuit 132 kv. transmission line, 16½ miles route length will be constructed from Moni Power Station to the new sub-station near Limassol. Two new 66/11 kv. sub-stations will be established, one at Limassol and the other at Pissouri. The existing 66 kv. sub-stations at Lefkoniko, Pyroi, Larnaca, Kolossi, Ktima, Trimiklini and Peristeronari will be extended.

(*c*) *Distribution*

The 11,000 vott and low voltage systems in towns and rural areas will be extended. Six hundred sub-stations in towns and villages will be established and 100 miles of 11,000 volts and low tension underground cables will be laid. Nine hundred miles of 11,000 volts and low tension overhead lines will be constructed and 55,000 service lines will be connected. Supply will be made available for the first time to 200 more villages ; and this will make it possible for 96 per cent of the rural population of the Island to be supplied with electricity by the end of the Plan period.

3.2 Demand Forecasts

Consumption of electricity by major class of consumer has been projected as follows :

In Thousand Units (kwh)

	1966	1971	Annual Rate of Growth
Domestic	65,569	102,648	9.4
Commercial	104,315	132,085	4.8
Industrial	74,982	145,908	14.2
Irrigation	9,048	12,567	6.8
Street Lighting	9,020	15,060	10.8
Total	262,934	408,268	9.2

3.3 Generation of Electricity

Electricity production has been estimated on the basis of the projected consumption, plus the expected system losses, as follows :—

In Million kwh

	Units generated	System losses (per cent)	Units sold
1962..	248.2	16.2	207.9
1966..	348.9	24.2	262.9
1971..	523.5	22.0	408.3

The capacity of the Electricity Authority of Cyprus is expected to be sufficient to meet the anticipated increase in the system of maximum demand estimated to reach 128 M.W. by 1971.

3.4 Gross Output, Value Added and Employment

On the basis of the above projections, gross output, value added and employment will be as follows :—

	1966	1971
Gross Output (£ 000)	2,743.7	4,079.0
Value Added (£ 000)	2,076.2	3,190.3
Employment (No.)	1,445	1,547

3.5 Investment

To attain the targets set for the Second Plan period, an investment of £5.9 million will be necessary, as follows :—

Investment Programme, 1967–1971
(£ 000)

	1967	1968	1969	1970	1971	Total
Buildings	109	155	64	38	38	404
Machinery	1,098	1,668	1,277	782	702	5,527
Total	1,207	1,823	1,341	820	740	5,931

In addition, expenditure of the order of £64,000 will be incurred on land acquisition bringing the total expenditure on electricity development to about £6 million. The following table gives a breakdown between local costs and the foreign component part of the expenditure :

	Foreign Costs £ 000	Local Costs £ 000	Total £ 000
1967	830	395	1,225
1968	1,300	536	1,836
1969	882	470	1,352
1970	527	304	831
1971	464	287	751
Total	4,003	1,992	5,995

3.6 Financing

The programme will be financed from internal and external sources, as follows :

(£ 000)

	1967	1968	1969	1970	1971	1967–71
E.A.C. Sources ..	1,049	1,306	1,058	831	751	4,995
External Sources (I.B.R.D. Loan) ..	176	530	294	—	—	1,000
Total	1,225	1,836	1,352	831	751	5,995

3.7 Rural Electrification Programme

A noteworthy feature of the programme is the continued emphasis given to rural electrification. The progress attained in this field and the targets of the Second Plan are shown below :—

Number of villages on supply at the end of 1960	96
Number of villages connected during 1962–1966 ..	220
Number of villages on supply at the end of 1966 ..	316
Number of villages to be connected during 1967–1971	200
Number of villages on supply at the end of 1971 ..	516

Thus, with the successful implementation of the programme, by 1971

(*a*) 97 per cent of the total population of the Island will be on supply ;
(*b*) 100 per cent of the town population will be on supply ; and
(*c*) 96 per cent of the rural population will be on supply.

CHAPTER 10

CONSTRUCTION, HOUSING AND TOWN PLANNING

1. Introduction

The importance of the construction sector in the development effort lies in its contribution to Gross Domestic Product, to employment, and above all to fixed investment. Indeed, the construction sector is the vehicle through which the major part (about 56 per cent in 1966) of fixed investment takes place and by means of which the productive capacity of the economy is enhanced. The contribution of construction to Gross Domestic Product had increased from 4.8 per cent in 1961 to 5.4 per cent in 1966. In the field of employment it was occupying, part-time or full-time, about 22,000 people in 1966 representing about 10 per cent of the country's labour force.

Evidently, an exposition of the problems and prospects of this sector is essential in assessing the feasibility of the Plan targets. But more than this, there is also the related problem of housing and town and country planning. All these matters will be dealt with in subsequent paragraphs.

2. Recent Trends

2.1 Trends in Gross Output

The gross output of the construction sector can be divided into dwellings, non-residential buildings, other construction and repairs and maintenance. Tables 1 and 2 give a summary of the evolution of output between 1961 and 1966 at current market prices and at constant prices of 1966 respectively.

Gross Output of the Construction Sector, 1961-1966
(*At Current Market Prices*—£mln.)

TABLE 1

	1961	1962	1963	1964	1965	1966	Index 1961–1966 (1961=100)	Annual Rate of Growth
1. Dwellings ..	4.4	5.3	5.8	3.1	4.5	7.6	172.7	11.5
2. Non-residential Buildings ..	1.3	1.5	2.2	0.9	1.2	4.0	307.7	25.2
3. Other Construction	3.2	3.5	3.8	4.1	4.2	3.6	112.5	2.4
4. New Construction	8.9	10.3	11.8	8.1	9.9	15.2	170.8	11.3
5. Repairs ..	1.4	1.4	1.4	1.4	1.5	1.6	114.3	2.7
6. Gross Output ..	10.3	11.7	13.2	9.5	11.4	16.8	163.1	10.3

Sources : Statistics and Research Department,
Palnning Bureau.

Gross Output of the Construction Sector, 1961–1966 (1)

(*At Constant,* 1966 *Prices*—£mln.)

TABLE 2

	1961	1962	1963	1964	1965	1966	Index 1961–1966 (1961= 100	Annual Rate of growth
1. Dwellings	4.8	5.8	6.4	3.2	4.6	7.6	158.3	9.6
2. Non-Residential Buildings	1.4	1.6	2.5	1.0	1.2	4.0	285.7	23.4
3. Other Construction	3.5	3.9	4.1	4.4	4.4	3.6	102.9	0.6
4. New Construction	9.7	11.3	13.0	8.6	10.2	15.2	156.7	9.4
5. Repairs	1.5	1.6	1.5	1.5	1.6	1.6	106.7	1.3
6. Gross Output	11.2	12.9	14.5	10.1	11.8	16.8	150.0	8.4

Source : Planning Bureau.

It will be seen that the upsurge in constructional activity during the First Five-Year Plan was dominated by dwellings, which represented 42.9 per cent of total construction in 1961 and 45.2 per cent in 1966 (2). The second major source was "other construction"—roads, dams, soil conservation works etc. Other construction comprised 21.4 per cent of total construction in 1966. Non-residential buildings (factories, hotels, offices, centres of entertainment etc.) showed an unprecedented growth, increasing their relative share to total construction from 12.5 per cent in 1961 to 23.8 per cent in 1966.

2.2 Other Indicators of Growth: Value Added, Employment, Investment in Machinery, etc.

The most important implications of construction activity during 1961–1966 are summarised in Table 3.

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(1) The gross output estimates, given in Tables 1 and 2 above, differ from the estimates published in the Economic Report of 1966 as a result of revisions in the output of dwellings and repairs and maintenance. These revisions were found to be necessary after the 1966 Construction Survey, carried out by the Statistics Department, indicated that the output regarding dwellings and repairs had been overestimated.

(2) Volume of construction as measured by value at constant, 1966 prices.

TABLE 3 **Output, Employment and Other Indicators of Growth of the Construction Sector, 1961–1966**

	1961	1962	1963	1964	1965	1966	Index 1961–1966 (1961 = 100)	Annual Rate of Growth
1. Gross Output (At Current Market Prices–£mln.)	10.3	11.7	13.2	9.5	11.4	16.8	163.1	10.3
2. Inputs (At Current Market Prices—£mln.) ..	5.5	6.3	7.2	4.9	6.1	9.3	169.1	11.1
3. Value added (£mln.) :—								
(*a*) At Current Prices	4.8	5.4	6.0	4.6	5.3	7.5	156.2	9.3
(*b*) At Constant, 1966 Prices ..	5.2	6.0	6.6	4.9	5.5	7.5	144.2	7.6
4. Ratio of Value Added to Gross Output	47	46	46	48	47	45		
5. Actual Employment (000's) ..	20.2	20.5	21.3	20.2	20.8	21.8	107.9	1.5
6. Imports of Construction Machinery (£ 000) ..	252	1,137	1,218	557	851	786	312	25.5

Source : Planning Bureau.

2.2.1 Value Added and Employment

Evidently the construction sector has been expanding very rapidly, more rapidly than the economy as a whole. The gross output was increasing at a compound rate of 10.3 per cent and value added at 9.3 per cent at current market prices or 7.6 per cent at constant, 1966 prices.

As far as employment is concerned, the sector employed about 20,200 persons in 1961 (or 9.3 per cent of the gainfully employed population) and 21,800 in 1966 (or 9.7 per cent of the gainfully employed). The rate of growth of employment was very small—1.5 per cent per year—compared to the rate of growth of output.

2.2.2 Inputs of Materials and Machinery

Construction inputs, as shown in Table 3, comprise the difference between " value added " and " gross output ". They consist of the value of all material inputs (imported and domestically produced) as well as such current inputs as fuel and other operating expenses of construction machinery.

Table 4 gives an idea of the growth in some of the locally produced construction materials. Estimates for these are available only as far back as 1962, the last year in which an industrial census was taken.

The growth indicated in Table 4 (9.5 per cent per annum at current market prices and 11.0 per cent at constant, 1966 prices) confirms the rapid growth in gross output, inputs and value added noted in connection with Table 3.

TABLE 4

Locally Produced Construction Materials, 1962 and 1966

	At Current Market Prices				At Constant, 1966 Prices			
	£ 000		Growth 1962–66		£ 000		Growth 1962–66	
	1962	1966	Index 1962=100	Rate per Annum	1962	1966	Index 1962=100	Rate per Annum
(*a*) Non-metallic Mineral Products	1,717.0	1,971.1	114.8	3.5	1,643.8	1,971.1	119.9	4.6
Structural Clay Products	907.0	1,052.0			907.0	1,052.0		
Cement	651.0	570.1			577.8	570.1		
Other	159.0	349.0			159.0	349.0		
(*b*) Quarrying Materials	342.8	992.5	289.5	30.4	309.5	992.5	320.7	33.8
Stones	40.5	205.3			70.8	205.3		
Sand, Gravel, etc.	210.0	630.8			160.1	630.8		
Havara	22.0	75.2			8.3	75.2		
Marble	32.2	38.8			32.2	38.8		
Gypsum	38.1	42.4			38.1	42.4		
(*c*) Total All Materials (a+b)	2,059.8	2,963.6	143.9	9.5	1,953.6	2,963.6	151.7	11.0

Source : Estimated by the Planning Bureau on the basis of the 1962 Industrial Census and Special Surveys carried out in 1967.

Imports of Construction and Furniture Materials, 1961, 1962 and 1966
(£ 000)

TABLE 5

	1961	1962	1966
1. Wood and Lumber	482.6	1,017.7	755.1
2. Veneers and Plywood	223.2	262.2	266.5
3. Builders Woodwork	36.6	26.1	21.4
4. Building Board	186.5	173.4	144.7
5. Paints, Varnishes, etc.	320.0	354.7	358.3
6. Cement	289.8	379.9	476.2
7. Bricks and Tiles	116.4	140.8	150.0
8. Asbestos Pipes and Tubes ..	106.5	148.8	114.0
9. Glass	87.4	80.9	83.0
10. Joints, Girders, etc.	2,181.6	2,281.2	2,596.4
11. Prefabricated Buildings and Fixtures	420.8	459.8	462.7
Total	4,451.4	5,325.5	5,428.3

Source : Compiled by the Planning Bureau on the basis of the Import and Export Publications of the Statistics and Research Department.

A further indication of the inputs used in the construction sector is given in Table 5. The small increase in the imports of these materials is partly accounted for by the progress of the domestic industry (paints, plastic wires, lumber etc.) and partly by the fact that imports in 1965 were unduly high and a greater consumption in 1966 was made possible by a reduction in stocks. Not all the items listed in this table, however, have been used for construction purposes ; a proportion thereof has been used by the furniture and other industries, but a precise and detailed estimate of this part is not available.

2.2.3 Productivity in the Construction Industry

The high productivity growth (¹) during the First Five-Year Plan may be attributed largely to the imports of construction machinery. A total of almost £5 million of such machinery was imported during 1962–1966 ; annual imports ranged between £252,000 and £1,218,000. This relatively rapid growth in the importation of machinery reflects the accelerated pace of mechanization of the construction industry and must be responsible for the fact that employment in the construction sector has increased very little. In other words, machines have been displacing workers and per capita output has been going up.

Despite the big strides forward made by the industry, the margins of possible improvement are still substantial. As Table 6 indicates, the sector is still dominated by the small firm. Only a few firms are of an adequate size as to be able to employ up-to-date methods and equipment.

(¹) Value added per employee.

TABLE 6

Employment by Establishments Employing 10 or More Persons during 1966

	Total	Private Construction Companies	Electrical Installation Companies	Other Private Construction Companies	Public Works	Public Construction	British Authorities
No. of Establishments	148	99	10	19	13	6	1
Employment (in thousands) during :—							
December, 1965	8.0	3.5	0.3	0.4	2.4	0.2	1.2
March, 1966	8.8	3.7	0.3	0.4	3.0	0.2	1.2
April, 1966	8.1	3.5	0.3	0.4	2.5	0.2	1.2
May, 1966	8.7	3.6	0.3	0.3	3.2	0.2	1.1
June, 1966	9.1	3.9	0.3	0.3	3.3	0.2	1.1
July, 1966	8.0	3.9	0.2	0.2	2.5	0.1	1.1
August, 1966	7.8	3.8	0.2	0.2	2.4	0.1	1.1
September, 1966	8.3	4.2	0.2	0.3	2.3	0.2	1.1
October, 1966	8.7	4.3	0.2	0.2	2.7	0.2	1.1
November, 1966	8.1	3.9	0.2	0.2	2.5	0.2	1.1
December, 1966	6.8	3.5	0.2	1.2	1.7	0.1	1.1

Source : Labour Market Survey for 1966, Ministry of Labour and Social Insurance.

Besides portraying the structure of the construction sector as far as firms employing 10 or more persons are concerned, Table 6 brings to light a number of other interesting facts relating to this sector. Thus, firms employing 10 or more persons occupied approximately one third of the sector's labour force. Seasonal fluctuation in employment does not appear to be as large as it is sometimes assumed, varying within a range of 8 per cent above and below the average of 1966. Such fluctuation probably affects more the smaller firms. Seasonal unemployment in construction is largely due to the fact that during the winter months construction activities of both Government and the private sector are restricted on account of the weather.

2.2.4 Housing Conditions—Town and Country Planning

(*a*) *Housing conditions*

Good housing conditions constitute an important element in the standard of living of the population. Rapid economic and social development in Cyprus during recent years has been accompanied by a boom in housing construction. Thus, between 1961 and 1966 construction of dwellings comprised about 50 per cent of all construction activity.

The main sources of demand for housing have been :—

(i) the rapid expansion in urban population due to urbanization and the presence of foreign families ;
(ii) the growth in the population ; and
(iii) the demand for better housing

The extent of urbanization is demonstrated by the fact that between the Census years 1946 and 1960 town population was increasing at a rate of 4.2 per cent per year as against 0.7 per cent in the villages. The consequence was that in 1960 town population was 77.6 per cent higher than in 1946, whereas that of the villages had increased by only 10.2 per cent.

The demand for better housing is related to per capita income and the state or standard of existing accommodation. Although on first impression most houses in Cyprus towns appear to be new and modern, the 1960 Census revealed that 40 per cent of all urban dwellings and 65 per cent of all rural dwellings were built prior to 1945. There is no doubt that considerable progress has been made since that time, but there are still substantial margins for improvement, especially in villages. As far as quantitative progress is concerned, available information suggests that the number of urban dwellings increased from approximately 50,000 in 1960 to 60,000 in 1966 and that of rural dwellings from 110,300 to about 122,600 respectively.

As to the qualitative aspect of housing, Table 7 reveals the gradual but positive improvement which has taken place during the last two decades.

Percentage Distribution of Population by Number of Persons per Room, 1946, 1960, 1965

TABLE 7

Persons per Room	1946	1960	1965
(*a*) 0–1 *Persons/Room* :			
Whole Cyprus	5.4	15.4	18.9
Urban Areas	9.7	21.4	25.9
Rural Areas	4.0	12.0	14.8
(*b*) 1–2 *Persons/Room* :			
Whole Cyprus	28.4	38.5	41.6
Urban Areas	38.8	43.3	45.0
Rural Areas	24.8	35.8	39.6
(*c*) 2–3 *Persons/Room* :			
Whole Cyprus	24.3	23.0	22.6
Urban Areas	20.7	18.9	18.2
Rural Areas	25.5	25.3	25.2
(*d*) 3–4 *Persons/Room* :			
Whole Cyprus	19.9	13.7	11.8
Urban Areas	14.8	9.7	7.8
Rural Areas	21.6	16.0	14.1
(*e*) 4 *or more Persons/Room* :			
Whole Cyprus	22.0	8.9	4.5
Urban Areas	16.0	5.8	1.9
Rural Areas	24.1	10.7	6.0
(*f*) *Not stated* :			
Whole Cyprus	—	0.5	0.6
Urban Areas	—	0.9	1.2
Rural Areas	—	0.2	0.3

Source : Joint Study by Planning Bureau and Department of Town Planning and Housing.

The occupational density in 1946 was 1.91 persons per room for the Island as a whole, with rural areas having a density of 2.04 and urban areas a density of 1.61. The corresponding density for 1960 was 1.30 (1.36 for rural areas and 1.20 for urban areas) and for 1965 1.15 (1.20 and 1.08 respectively).

In spite of the remarkable progress made since Independence, there is still much scope for improving housing conditions, more particularly in rural areas. At the same time the price of building sites and the cost of building a house are high and beyond the means of many families. There are also very few specialized institutions providing long-term credit for building or buying houses.

(*b*) *Town and Country Planning*

In practice there has been so far no proper town and country planning in Cyprus. Any control and regulation carried out has been exercised under the Streets and Buildings Law and

Regulations. Most town and village improvement projects are carried out on an *ad hoc* basis and, even though they are co-ordinated with each other and fit into overall economic development policies, they can hardly be said to form part of a comprehensive town and country plan. The result has been haphazard physical development and parcellation of land.

(*c*) *Development Expenditure on Town Planning and Municipal Projects during* 1962–1966

In view of the Local Government set-up in Cyprus and the weak financial position of some municipalities, the Government had to shoulder a substantial proportion of expenditure on projects which might properly have been classified as municipal (see Table 8).

Government Development Expenditure on Town Planning and Municipal Projects, 1962–1966

TABLE 8

	£ 000
(1) Town Planning :	
Low Cost Housing	135.4
Town and Country Planning Schemes	296.4
Total Town Planning	431.8
(2) Municipal Projects :	
Loans for Municipal Projects	136.0
Total Town Planning and Municipal Projects	567.8

Source : Planning Bureau.

3. Prospects for the Future—Targets for the Second Plan

The prospects of construction activity in the Second Plan period are good—in fact it is anticipated that pressures are likely to be exerted on the capacity of the construction industry.

3.1 Gross Output and Value Added

The high rate of growth in fixed investment envisaged in the Plan will entail a similarly rapid rate in construction turnover and value added. The ratio of construction to machinery in fixed investment is expected to increase from 56:44 in 1966 to about 63:37 in 1971 (or about 61:39 for the five-year period as a whole).

The volume of construction output(¹) is forecast to increase at the rate of 10.4 per cent per year (see Table 9). This will be primarily the result of the stepping up in Government development expenditure and the stimulating effects various policies and programmes are expected to have on the private sector, especially in the field of tourism, industry and communications.

Value added by the construction sector is anticipated to rise at a slightly faster rate than gross output—10.6 per cent per

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(¹) As measured by value of gross output at constant, 1966 prices.

annum—and this will entail some improvements in the efficiency of the sector. In absolute terms it is estimated that value added will increase from £7.5 million in 1966 to about £12.4 million in 1971.

Gross Output of the Construction Sector, 1961, 1966 and 1971
(*At Constant*, 1966 *Prices*—£mln.)

TABLE 9

	1961	1966	1971
Dwellings	4.8	7.6	9.0
Other Construction	4.9	7.6	16.4
Repairs and Maintenance	1.5	1.6	2.2
Total	11.2	16.8	27.6

Source : Planning Bureau.

3.2 Employment

The labour required to carry out the volume of construction work envisaged in the Plan is expected to rise from 21,800 in 1966 to around 27,000 in 1971. This assumes that labour productivity will be growing at approximately the same rate as during 1962–1966.

3.3 Housing, Town and Country Planning and Public Buildings

(*a*) *Demand for Housing*

Demand for housing has been projected into 1971 on the basis of population growth, increase in per capita disposable income and further improvements in housing standards. It has been assumed, however, that the rate of growth of construction of dwellings will slow down during the Second Plan period, because of the expected run-down of foreign forces.

The Government will study ways and means of encouraging improvements in housing conditions (especially in rural areas) in line with the standards and criteria to be laid down by the Town and Country Master Plan now under preparation. Various ways of promoting low cost housing for the lower income groups (*e.g.* by setting up building societies) will be considered. Detailed studies will be made and, if necessary, schemes will be promoted for rehousing people living in sub-standard houses and for keeping construction costs down (*e.g.* by encouraging some form of house standardization). Similarly, measures will be taken to curb the rising price of land suitable for building purposes.

(*b*) *Town and Country Plan and Municipal Projects*

Of major importance to the future development of the Island will be the Town and Country Master Plan currently being prepared by the Town Planning and Housing Department of the Government in collaboration with Nottingham University (¹). This Plan will cover the physical aspects of development in a systematic and comprehensive way. It will lay down the criteria and will provide the means by which land for residential, industrial and tourist purposes will be developed in a controlled and regulated manner so that physical factors may not evolve as bottlenecks in the process of optimum economic and social development.

New legislation has already been drafted which is expected to have far-reaching effects. Under the Law all town and country land development schemes—national, regional or local—will be governed by a Master Plan and all applications for the division of land or building permits for any purpose will be subject to control and regulation.

In parallel, a Town and Country Planning Committee has been established, which, in close cooperation with the Planning Bureau, will be responsible for physical planning in the Island. A special multi-professional team, within the Department of Town Planning and Housing, in association with town planning experts from Nottingham University, is engaged on a three-year project to produce the Master Plan and process administrative or other details. In addition, the Department of Town Planning and Housing is being expanded and restructured to cope with extended functions and tasks.

Government development expenditure (in the form of loans or grants) earmarked for the Second Plan period are shown in Table 10.

Development Expenditure on Town Planning and Municipal Projects, 1967–1971

TABLE 10

	(£mln.)
Town and Country Planning Schemes	0.85
Municipal Projects (including Sewerage Schemes)	2.00
Other (including Administration)	0.15
Total	3.00

These expenditures are five times higher than those realised during the First Five-Year Plan and reflect the importance attached by Government to the physical aspects of planning.

(*c*) ***Public Buildings***

In addition, provision of about £800,000 has been made to finance the initial phase of a Central Government Buildings Complex and various other public building projects. At present, many Government Ministries and Departments are ac-

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(¹) **Under bilateral technical assistance arrangements.**

commodated in unsatisfactory buildings, many of which were not intended for office use ; and this coupled with the fact that they are widely scattered and that their internal lay-out is functionally inadequate, has, *inter alia*, an adverse effect on efficiency. The proposed Complex will be based on a master plan which will be implemented in stages. It will thus be possible to raise the standard of accommodation, to provide more congenial conditions of work which will be conducive to increased efficiency and to render better service to the public.

3.4 Non-residential and Other Construction

By far the biggest stimulus to construction activity will originate from non-residential and other construction. Indeed, the level of such construction is expected to be double that of 1966. The explanation for this rate of expansion is to be found in the fact that the category of non-residential and other construction will carry the burden of the heavy fixed investment programme in such sectors as tourism (hotels etc.), industry (factories, offices) and infrastructure (roads, harbours, water works, sewerage projects).

3.5 Measures to Facilitate Implementation of the Construction Programme

(*a*) *Public Sector*

It is estimated that over 40 per cent of the construction activity will materialize in the public sector. To overcome any possible bottlenecks, the following measures are envisaged :

The two main Government Departments entrusted with constructional work are the Public Works Department and the Water Development Department. Admittedly, the implementation of the Plan will impose a heavy burden on these Departments and for this reason it is proposed to take steps to improve the technical staff situation through the appointment of more staff and through training and at the same time to provide the Departments with adequate and suitable machinery and equipment. But even then, it will probably be necessary to contract out some design and construction work especially in the case of major projects (*e.g.* ports, dams, major public buildings). In the case of projects for which local firms do not possess the requisite experience or facilities use can be made of foreign firms. To ensure efficient and timely implementation, however, such a policy of " contracting out " presupposes, (i) that the project design and supervision staffs of these Departments will be strengthened ; and (ii) that strict criteria will be laid down concerning the qualifications and conditions which private contractors should satisfy before they are eligible to bid for any project. At the same time it is desirable to establish an Institute of Standards which, *inter alia*, will specify the quality of materials required for each type of construction and to set up a Government laboratory to facilitate the specification, testing and certification of materials.

(*b*) *Private Sector*

There is also ample scope for improvement in the private sector. New types of buildings and modern building techniques require diverse specialist and qualified personnel. Training of works managers and supervisors will be offered by the Cyprus Productivity Centre but it might be advisable for construction firms to set up their own training programmes. The process of productivity increase and production cost reduction may also be facilitated by further mechanization and standardization.

CHAPTER 11

TRANSPORT AND COMMUNICATIONS

1. Introduction

The contribution of this sector to Gross Domestic Product increased from £12.6 million in 1961 to £16.7 million in 1966 (at 1966 prices). This represents an average rate of growth of about 5.8 per cent per annum which is slightly above the corresponding rate of growth of Gross Domestic Product. The expected annual rate of growth for the Second Five-Year Plan is between 6.5 and 7.0 per cent, which is about the same as the anticipated overall rate of growth of the economy.

The sector covers such important fields as Roads and Highways, Ports and Airports, Inland Transport, Shipping and Air Transport, Telecommunications, Postal Services and Broadcasting and Television. In 1961 the sector provided employment to about 9,400 people and to 10,500 people in 1966, i.e. to 4.3 per cent and 4.6 per cent respectively of the total gainfully employed. During the First Five-Year Plan altogether £22.4 million (at 1966 prices) were invested in this sector, which represents about 19 per cent of total investment.

Further development of this sector is necessary if the anticipated economic growth will not be retarded by lack of transport capacity and communication facilities generally. The provision of increased and improved transport and communication services and facilities will have a favourable effect on industrial and agricultural efficiency, costs and prices, the balance of payments, the tourist industry and social development.

2. Internal Transport : Roads and Highways

2.1 General

In Cyprus, internal transport is carried out exclusively by road and this is likely to continue for the coming five-year period. Railway communications, coastal shipping and internal air services are non-existent. Hence the tremendous importance of roads in the Island's economic and social life. A good road network is a necessary prerequisite for accelerated economic development. It helps to expand the domestic market and has a stimulating influence on the various sectors of the economy.

Although all towns and major rural and tourist areas in Cyprus are served by asphalted roads, experience has shown that the standard of most of these roads, especially those constructed in the past, is inadequate to meet modern traffic needs. The deficiencies of the existing network relate both to the geometric features of the roads and to the strength of the road pavement.

There are at present four authorities with road jurisdiction, i.e. with responsibility for the design, construction and maintenance of roads. These are the Public Works Department (Ministry of Communications and Works), the District Administration (Ministry of the Interior), the Forest Department (Ministry of Agriculture and Natural Resources) and the Municipalities. At the end of 1966 their juristiction extended over the following mileage of roads :

P.W.D. Roads	.. 23.2	per cent
District Administration Roads ..	.. 53.2(¹)	”
Forestry Roads	.. 14.2	”
Municipality Roads	.. 9.4	”

Generally speaking, trunk roads and major tourist and certain village roads are under the jurisdiction of the P.W.D. The District Administration is responsible for the majority of village roads as well as for village streets, the Forest Department for roads within forests, and Municipalities for streets within their boundaries.

2.2 Progress during the First Plan Period, 1962–1966

Table 1 summarizes the mileage of public roads for the period 1961–1966, classified by authority and surface condition.

TABLE 1 **Mileage of Public Roads, 1961–1966**

Authority	1961	1962	1963	1964	1965	1966
P.W.D. Roads : (²)						
Bituminous Surface ..	897	944	991	1,052	1,077	1,091
Gravel Roads.. ..	156	134	111	71	63	63
Total	1,053	1,078	1,102	1,123	1,140	1,154
District Administration Roads :						
Bituminous Surface ..	276	341	430	619	635	656
Gravel Roads.. ..	1,888	1,971	1,877	1,991	1,969	1,987
Total ..	2,164	2,312	2,307	2,610	2,604	2,643
Forestry Roads—Gravel	569	593	625	662	692	703
Municipality Roads :						
Bituminous Surface ..	289	304	313	317	323	334
Gravel Roads ..	134	125	123	123	121	131
Total ..	423	429	436	440	444	465
GRAND TOTAL ..	4,209	4,412	4,470	4,835	4,880	4,965
of which :						
Bituminous Surface ..	1,462	1,589	1,735	1,988	2,035	2,081
Gravel Roads.. ..	2,747	2,823	2,735	2,847	2,845	2,884

Source : Statistics and Research Department, Economic Report and P.W.D. Annual Report.

It will be seen from Table 1 that between 1962–1966 the structure of the road system has improved, roads of bituminous surface now constituting 42 per cent of total mileage, as compared to 35 per cent in 1961.

(¹) The percentage for the District Administration includes also village streets.

(²) Does not include Base areas roads of a total mileage 46.5.

Road density is high amounting to 1.18 miles of road per square mile in 1961 and about 1.40 miles in 1966. The road network of the Island is denser than that in many neighbouring as well as Southeastern European countries. This does not mean, however, that the standard of the Island's roads is higher than in all those countries.

The planned expenditure target on road development of £5,460,000 during the First Five-Year Plan was attained. Altogether, £5,470,000 were spent on road development which represents about 14 per cent of total development expenditure in the public sector. Analytically, expenditures on road development and maintenance are given in Table 2.

Expenditure on Road Construction and Maintenance, 1961–1966

TABLE 2 (*At Current Prices—£ 000*)

	1961	1962	1963	1964	1965	1966	1962–1966
A.—P.W.D. Roads	988	1,039	840	839	575	782	4,075
1. Road Development . .	798	842	652	660	411	618	3,183
2. Maintenance	190	197	188	179	164	164	892
B.—District Administration Roads	331	534	499	489	279	258	2,059
1. Road Development . .	228	423	395	394	192	166	1,570
2. Maintenance	103	111	104	95	87	92	489
C.—Forestry Roads	41	45	53	43	43	44	228
1. Road Development . .	20	25	32	23	22	23	125
2. Maintenance	21	20	21	20	21	21	103
D.—Municipal Roads	125	199	157	171	191	174	892
1. Road Development . .	58	121	100	123	118	130	592
2. Maintenance	67	78	57	48	73	44	300
GRAND TOTAL . .	1,485	1,817	1,549	1,542	1,088	1,258	7,254
1. Road Development . .	1,104	1,411	1,179	1,200	743	937	5,470
2. Maintenance	381	406	370	342	345	321	1,784

Source : Planning Bureau.

During 1962–1966 an amount of £1,784,000 was spent on road maintenance. Routine maintenance comprises, in the case of gravel roads, cleaning of berms and drains, repairing of culverts and retaining walls, surface blinding etc. Asphalted roads in addition to the above, need periodical patching and resealing.

2.3 Identification of Problems

(*a*) One of the problems, which is of an institutional and administrative nature, has already been mentioned, and this is the existence of a multiplicity of road making authorities. It would appear that a more efficient administration of the road network would be possible if there were a unification of responsibility. This would facilitate proper planning and control and also a more efficient use of staff and equipment.

(*b*) The present method of parcellating the road programme into a large number of small and larger projects scattered all over the Island does not lend itself to proper planning, design and supervision. A sound programme should rather concentrate on a fewer projects for which adequate provision should be made so that they may be completed within the shortest possible period of time.

(*c*) The standard of maintenance needs improvement. It appears that a substantial amount of deferred maintenance work has been accumulated and this makes it necessary to step up the provision of funds for this purpose.

(*d*) There is a need to introduce appropriate design construction standards based on internationally accepted criteria suitably adapted to local conditions and taking into account the expected traffic growth as influenced by the population growth and the agricultural, industrial and tourist development.

(*e*) There is a shortage of adequately trained staff to undertake proper planning, design, supervision and execution of road development projects.

(*f*) Road designs are at present made without due regard to the engineering properties of soils. It is essential that adequate identification of subsurface conditions should be made not only for roadway but also for bridge and pavement designs. This points to the necessity of strengthening the laboratory of the P.W.D.

(*g*) There are no adequate data (e.g. traffic census data for which see paragraph 2.4 below) which would enable a reliable forecast of highway needs.(1)

2.4 Estimating Future Needs

The following are comparative road transport statistics relating to 1961 and 1966 :

	1961	1966
Area of Cyprus (square miles)	3,572	3,572
Population	576,400	599,800
Number of Licensed Vehicles	48,002	58,444(2)
Length of Roads (miles)	4,209	4,965
Inhabitants per square mile	161	168
Miles of Road per square mile	1.2	1.4
Vehicles per square mile	13.4	16.4
Inhabitants per mile	137	121
Vehicles per mile	11.4	11.7
Inhabitants per vehicle	12.0	10.3

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(1) Most of these shortcomings have also been confirmed and included in a report to Government by an I.B.R.D. highway mission.

(2) Licensed vehicles exclude cars owned by Turks which are not licensed.

The lack of adequate inland freight and passenger transport statistics over the past five years makes it impossible for one to establish with a reasonable degree of accuracy whether demand in 1971 will be compatible with road capacity. On the basis of past trends in new car registrations, the number of cars may be expected by 1971 to increase to such a point that the inhabitant/vehicle ratio may be reduced to about 8 or even less. The increase in the number of vehicles will inevitably lead to a corresponding growth in traffic consisting essentially of the following components : (i) The Normal Traffic Growth ; (ii) the Generated Traffic ; and (iii) the Development Traffic.

A basic prerequisite for the accurate determination of the traffic growth is the existence of a permanent traffic counting system. It is proposed to establish such a system during the Second Plan period.

2.5 The Second Five-Year Plan

On the basis of such data as it has been possible to assemble a road development programme has been prepared for the Second Plan period. For this purpose, a specific list of projects has been drawn up which may be grouped into three main categories :

(*a*) Continuing projects, *i.e.* projects started during the First Plan, which it is necessary to complete as soon as possible.

(*b*) New schemes : These are road projects which are considered to command priority and are proposed to be undertaken during the Second Plan period.

(*c*) Improvements to and higher maintenance of completed trunk roads : To enable the Island's main trunk roads to carry safely and satisfactorily the increasing traffic, it is considered necessary to raise their standard.

The cost of this programme, which includes what are known as P.W.D. roads but also asphalting of a number of District Administration roads, has been estimated at about £6.2 million, and provision for this amount has been made in the Plan. In addition, the provision for maintenance which according to existing practice is included in the Ordinary Budget, will have to be increased possibly by more than 50 per cent.

Although the overall provision earmarked for this sector may be regarded for planning purposes as a reasonable estimate of the level of expenditure in this field, for the reasons given in paragraph 2.6 below, the list of individual projects should be regarded as tentative.

2.6 Need for a Road Development Master Plan

As indicated in paragraph 2.3 one of the basic weaknesses in existing arrangements is the scarcity of available data regarding highway needs ; of information designed to enable the introduction of appropriate standards ; and of necessary technical, engineering and economic feasibility studies designed to enable a priority ranking of projects. The stage has been reached when it is no longer economically justifiable to decide on projects in isolation and on an individual basis.

A road development master plan has become an absolute necessity. Such a plan would include the following :

"(i) An inventory and description of all existing roads, including P.W.D., District Administration, and Forestry roads, with information as to lengths, roadway characteristics and conditions, major structures, pavement type and width, right-of-way width, and general data on the topography, geology, climate, vegetation and land use in the areas served.

(ii) Traffic studies, giving an analysis of existing data and undertaking traffic counts and origin-destination studies.

(iii) Identification, description and quantification of existing and potential traffic generating sources.

(iv) Critical analysis of the existing road network, including identification of present deficiencies and analysis of alternative improvements of the road network.

(v) Preparation of a set of admissible design standards for improvements and reconstruction of roads, and of desirable minimum standards for new construction, taking into account the varying topographic and traffic conditions.

(vi) Estimates of total future traffic and assignment of suitable standards to each highway.

(vii) Determination of new highways to be constructed, of existing highways to be improved or reconstructed, and of highways to be maintained, to serve the expected national economic development in the next 10 years. Preparation of a general road development plan and preliminary cost estimates for the proposed works. The total scope of this plan should be consistent with budgetary, technical, and administrative limitations.

(viii) Listing of all roads to be constructed, improved or reconstructed, and of investments required for maintenance in the next 10 years by order of priority. The priority determination should be made in detail for the first 5-year period and in more general form for the succeeding 5 years, and should be based on an assessment of relative economic costs and benefits for each project.

(ix) Preparation of a financial programme for the proposed road development, maintenance, and organization plan." (¹)

(¹) Extract from the I.B.R.D. report referred to in paragraph 2.3

Preliminary work for the preparation of such a plan has already started, but Government is advised that this project cannot be a once-and-for-all exercise. There is a constant need for survey and research into road development and transportation problems. Road planning will have to be a continuous process. Present thinking is that an adequately equipped Transport Planning and Research Unit should be established within the Ministry of Communications and Works to undertake this task. Close liaison and collaboration would be needed between this unit and the Department of Planning and Housing. There is also a possibility that the U.K. Road Research Laboratory may participate in the work of this unit on a research basis. Simultaneously, it is proposed :

(i) To strengthen the Road Section of the P.W.D., Ministry of Communications and Works, through the appointment of qualified engineers and other technical staff and the provision of more facilities for local and overseas training and specialization in highway engineering ;

(ii) to enlarge and provide with modern equipment the P.W.D. road laboratory ;

(iii) to establish an up-to-date traffic counting system ;

(iv) to consider the possibility of contracting out some of the major road projects ;

(v) to ensure a better utilization of existing plant and machinery and in this connection to examine the feasibility of pooling Government mechanical workshops and strengthening district workshops ; and

(vi) to devise ways and means of rationalizing road administration.

3. Internal Transport : Means of Transport

The establishment of an efficient system of road transport is equally important for economic and social development, as the building of a good road network is. The motor car has become an important ingredient of the Cypriot's life. At the end of December, 1966, there was one private car for every 18 persons, while the ratio of all types of cars to population was 1 to 10.3. This compares very favourably with similar ratios in developed countries. The number of vehicles in circulation increased considerably from 1961 to 1966. In normal years, more than 5,000 vehicles of all kinds were added annually to circulation representing an annual rate of growth of about 10.5 per cent.

Until 1964, there was practically no legislation to regulate public transport. And for this reason, the public transport system developed in a haphazard and uncoordinated manner. With the introduction of the Motor Transport Regulation Law of

1964, which, *inter alia*, has enabled the regulation of routes, fares, bus stops and time tables, the situation has improved, but there is still a lot to be done especially in the way of raising the standards of the means of transportation.

During the Second Plan period it is proposed to look into this matter more closely and, in particular, to rationalize the urban bus transport services. In this connection, foreign expert assistance has been sought and appropriate provision has been included in the Plan.

4. External Transport : Ports

There are two broad objectives to be aimed at in the field of sea communications. Firstly, the provision and maintenance of the infrastructural works and other facilities and services required for the safe berthing and operation of ships in port ; and secondly, the existence of a regular sea communications network capable of serving the Island's present and future requirements.

4.1 The First Five-Year Plan

During the period of the First Plan a total amount of £1,660,000 was spent on port development. The Famagusta harbour was extended by the addition of three new deep-water berths and improvements to the small harbours of Kyrenia and Paphos were carried out. Government also provided a second tugboat for Famagusta, port equipment and machinery, as well as additional machinery for dredging.

In parallel, a number of feasibility studies were undertaken on future port development and these will form the basis for an extended activity in this sector during the Second Five-Year Plan.

4.2 The Second Five-Year Plan

Two new harbours are planned to be constructed during the period of the Second Plan, one at Limassol and another at Larnaca. At the same time improvements are to be effected to other harbours. The functioning of the Famagusta port will be improved through the erection of a new Customs House, new offices, a new passenger terminal, a second warehouse and a second open shed. The question of silo installations by the Grain Commission and other modern handling equipment for this port will also be studied as well as the provision of cold storage facilities for which a feasibility study has already been completed.

The small harbours of Kyrenia and Paphos will be improved further. The former has been improved in recent years by a breakwater extension. Further development works include dredging and small-craft slipway construction. Quay extension and dredging is also planned for the attractive small-craft harbour at Paphos. This will increase its capacity as a lighter basin for handling the small volume of general cargo which passes through Paphos. Both Kyrenia and Paphos harbours will be increasingly utilized by small pleasure vessels, when the expected increased tourist traffic materializes. The possibility of establishing yacht harbours is being investigated and a feasibility study for a marina near the old harbour of Famagusta has already been carried out.

Studies have been concluded on the establishment of a Free Port Zone/Industrial Estate adjoining the Famagusta harbour. This appears to offer attractive possibilities for entrepot trade and future development of light processing industry.

Finally, the feasibility of converting the existing pier belonging to the Hellenic Mining Company at Karavostassi so as to handle general cargo exports and imports (in addition to minerals), as well as the institutional and other arrangements necessary for this purpose are being studied.

A sum of £7.6 million has been earmarked from Government development expenditure for the above projects during the period in question. This represents a substantial increase over the expenditure realized during the First Five-Year Plan.

Apart from the above investment projects, a number of institutional and other measures are currently being studied. These include new legislation for the better functioning of the Department of Ports, the provision of port facilities on a more rational basis by relating, for example, port charges to the cost of port services rendered, etc.

5. External Transport: Shipping

5.1 Recent Trends and Developments

Sea and air transportation is vital for Cyprus in its economic and other contacts with the rest of the world. Though there are good communication lines, net registered tonnage of Cyprus shipping is small.

Gross tonnage of cargo imported and exported through various ports went up by 10.2 per cent between 1961 and 1966, while the number of passengers travelling by sea increased by 16.1 per cent during the same period. For the whole period, 1962–1966, 99.9 per cent of the total cargo landed and uplifted and 28.9 per cent of the number of passengers travelling in and out of the Island were effected by sea.

The share of Cyprus shipping in this traffic has been small. Until recently, there was no Cypriot Register of Ships. It was only in 1963 with the enactment of the Merchant Shipping Law that the first ship was registered under the Cyprus flag. Available statistics indicate that so far the benefits resulting from this legislation have been rather small. One should not, however, overlook the fact that Cyprus has no seafaring tradition and that progress in this field is bound to be slow. At the end of 1966, the total number of ships flying the Cyprus flag were 71, 49 for cargo, 2 for passengers, 5 tankers and 15 other. Their total gross tonnage was 356,619. Government's direct revenue from shipping as such (excluding port dues) amounted to £42,783 in 1966, £23,000 of which accrued from the tax on shipping tonnage. At the same time, 150 persons were employed on board Cypriot and foreign ships as apprentices or seamen.

The benefits accruing from shipping are : (*a*) The revenue derived from registration fees, crew fees, the tonnage tax, etc. (Ships registered under the Cyprus flag are exempted from the payment of income tax for a period of ten years from 1963). (*b*) The foreign exchange receipts mainly from remittances from seamen. (In the case of Cyprus there are as yet no statistical data on this item). (*c*) The creation of employment opportunities. (*d*) The diversification of the economy.

5.2 Policy under the Second Five-Year Plan

The policy in regard to merchant shipping will continue to be to increase the number of ships on the Cyprus Register of Ships, to provide the legal means to exercise the required control over them and to encourage more Cypriots to go to sea. In pursuit of these objectives, it is proposed during the Plan period (*a*) to consider ways and means of encouraging private investment in this industry ; (*b*) to encourage more Cypriot ships to trade with the Island ; (*c*) to encourage more Cypriots to become seamen. In this connection, scholarships will be granted for the training of Cypriots as officers, engineers and wireless operators ; and (*d*) to encourage shipowners to employ more Cypriots.

6. External Transport : Air Transport

6.1 Past Trends

As already indicated, more than 71 per cent of total passenger traffic between 1962–1966 was effected by air transport. The number of passengers travelling by air increased by 35 per cent during the same period, while freight showed a spectacular increase of 127 per cent. Future developments are expected to be even more spectacular.

There is only one international airport in Cyprus ; and no inland air transport has been developed as yet. Recent trends in air transport have been as follows :

	Landings (Civil, No.)	Passenger Traffic (¹) (No.)	Freight (Tons)	Mail (kgs)
1961	3,213	168,001	1,318	146,581
1962	2,882	168,303	1,413	188,116
1963	3,013	224,216	1,713	n.a.
1964	2,690	152,307	2,139	185,558
1965	2,617	196,681	2,716	210,241
1966	3,293	226,558	3,046	219,470
Growth (%) 1961–66	2.5	35	131	50

Source : Annual Report of Department of Civil Aviation.

It will be seen that landings have grown more slowly than passenger and cargo traffic. This was due to the introduction of larger aircraft and also possibly to the achievement of higher load factors. Passenger air traffic grew at a slower rate than the world rate ; and this may be accounted for by the setback in tourism after 1963.

6.2 The First Plan, 1962–1966

The main developments during the five-year period were :

(*a*) Bilateral air transport agreements. Altogether ten bilateral air transport agreements have been concluded with the Governments of Syria, Belgium, Greece, Switzerland, U.S.S.R., Sweden, Norway, Denmark, Hungary, Bulgaria.

Bilateral air transport agreements have been initialled between the Government of Cyprus and the Governments of the Netherlands, Jordan, the United Arab Republic and Turkey. Regular air services are operated to Cyprus by the following airlines :

Cyprus Airways/BEA
Olympic Airways
Middle East Airlines/Air Liban
United Arab Airlines
Hungarian Airlines (MALEV)
Israeli Airlines (EL AL)
Interflug
Aeroflot (USSR)
Bulgarian Airlines (TABSO)
Turkish State Airlines

(*b*) The construction of new terminal buildings which will start operating at the beginning of 1968.

(¹) Including persons in transit.

(*c*) Training of staff and acquisition of new telecommunications and airport equipment.

Public development expenditure in this sector during 1962–1966 exceeded £900,000.

6.3 The Second Five-Year Plan—Policy and Objectives

(*a*) The foremost aim during the period of the Second Plan will be to maintain the present regular and reliable network between Cyprus and Europe and the Middle East and to improve it where possible.

(*b*) The local air carrier (Cyprus Airways Limited, a Government controlled company) will be encouraged to play an increasingly important role in the development of the Island's air communications. It is understood in this connection that it is the aim of the Company to continue its development programme both in so far as frequency of services and capacity are concerned ; and at the same time to continue to offer the lowest possible fares for the promotion of tourism and other trade and cultural relations with other countries.

(*c*) The Government will provide the necessary infrastructural works and other services and facilities required therefor. In this connection a feasibility study is being carried out on the extension of the main runway and the installation of additional navigational aids at the Airport.

(*d*) The existing policy is to comply with the procedures and recommended practices laid down by ICAO. This policy will be continued.

(*e*) Cyprus will seek membership of the European Civil Aviation Conference.

(*f*) The possibility of effecting further simplification of controls and formalities at the Airport will be examined and vigorously pursued.

(*g*) The possibility of introducing internal services will be looked into in consultation with Cyprus Airways.

(*h*) As far as international services are concerned, it may be said that Cyprus is at present served satisfactorily by the existing air network and through the grant of inclusive tour and charter services where the public interest so requires. The bilateral air transport policy followed has enabled Cyprus to maintain a regular, reliable and safe air network with Europe and the Middle East which are of direct interest to her. The question now is how to improve the existing network and services and how more traffic can be attracted to Cyprus not only from the countries with which regular air services are currently operated but also from other countries in Europe and elsewhere. As far as the creation of more traffic on the existing network is concerned, a good start has already been made. BEA/Cyprus Airways and to a lesser extent Olympic Airways have launched an extensive publicity campaign and have increased considerably their capacity as compared with previous years. With regard to the encouragement of new carriers to operate to Cyprus, this will be done in such a way as to bring in operators from countries where new traffic can be generated.

(*i*) Since the establishment of the Republic, efforts have been made to reduce air fares where possible. Efforts will continue to be made to reduce air fares even more. Similarly, genuine charter services and inclusive tour services will be encouraged.

(*j*) The expansion of the existing air freight services will be encouraged and promoted.

(*k*) Consideration will be given to the establishment of a free zone at the Airport and the setting up of aircraft maintenance facilities.

(*l*) Necessary legal and institutional measures will be taken, such as the reorganization of the Department of Civil Aviation and the services provided at the Airport, the enactment of a comprehensive up-to-date Civil Aviation Law, and the training of staff.

6.4. Projects for the Second Plan

Among the projects, for which provision has been made in the Second Plan, is the extension of the runway referred to earlier ; extension of the parking apron ; a new control tower and area control centre (including equipment) ; telecommunications and navigational facilities equipment ; other airport equipment. The provision made for this purpose in the Plan is £1.8 million.

7. Communications

7.1 Telephone and Telegraph Services

7.1.1 Developments during the First Plan Period

The rise in the standard of living as well as the expansion of industrial and commercial activities during the past five years led to an increase in the demand for telephone and telegraph services. In order to meet this demand, the Cyprus Telecommunications Authority increased the subscribers underground line network and the capacity of exchanges, so that 11,100 additional telephones were installed. During the same period, 266 villages were connected with the telephone network and 53 public telephone booths were installed throughout the Island.

At the same time, external communications were improved by increasing the number of circuits to Lebanon and Israel and introducing the V.H.F. system.

The execution of this programme necessitated an investment of the order of £1.9 million.

7.1.2 Present Situation

At present there is telephone communication among all the urban centres as well as among 87 per cent of the rural population. The telephone network is almost wholly automatic. Telephone density is quite high and compares favourably with neighbouring countries, although there is still a wide disparity when comparison is made with Western European countries. As regards overseas communication, Cyprus is directly linked through radiotelephone with all neighbouring countries and the U.K. Ship to shore radiotelephone service is also available.

7.1.3 The Main Targets of the Plan Are :

(1) The introduction of the subscriber to subscriber automatic trunk dialling (S.T.D.) at all the main telecommunication centres.

(2) The introduction of the telex system in order to facilitate business.

(3) The expansion of the existing exchanges and the installation of new ones with a view to more than doubling the existing lines as well as the extension of the telephone network to another 40 villages.

(4) The improvement of overseas communication by increasing the number of circuits and replacing the H.F. technique by V.H.F. and tropospheric scatter.

7.1.4 Investment

The investment required to accomplish the above purposes has been estimated at about £2.8 million.

7.2 Postal Services

7.2.1 Past Developments and Present Situation

During the period 1962–1966 the efforts of the Department of Posts were concentrated on the establishment of new postal offices in the towns and the large rural centres, the extension of the house delivery system to the suburbs of the towns, the installation of a large number of letter boxes and the provision of more frequent mail services to the rural areas. A philatelic section was also established.

Overseas correspondence and parcels registered a modest increase of 12 and 8 per cent respectively, whereas because of the development of other means of communication local deliveries of both were declining steadily.

At the beginning of 1967, there were 30 offices and 837 postal agencies in the whole Island. Among the various towns there is postal communication three times a day. With regard to villages, 90 per cent of them have a daily mail service, while for the more remote villages there is a mail service three times a week.

7.2.2 Plan Objectives and Projects

The broad objectives to be pursued during the Second Five-Year Plan may be summarised as follows : daily delivery of mail to all villages ; extension of the house-to-house delivery service ; the establishment of a proper service for the delivery of " express " letters and parcels of small value ; and improvement of the services to the public in urban and rural areas.

The main projects included in the Plan are : the construction of a central parcels office and a new sorting room in Nicosia ; the erection or improvement of post offices in towns ; the establishment of more sub-offices in rural areas ; the continuation of the manufacture and installation of mail boxes and private post office boxes ; and, where possible, the mechanization of the services.

An amount of £150,000 has been allocated for the above purposes.

7.3 Radio and Television

Broadcasting informs, educates and entertains. Although most of the benefits are intangible, the importance of its contribution to economic and social development cannot be disputed. A recent Media Survey has shown that both radio and television have become an essential part of the life of the population.

7.3.1 Past Developments

During the period 1962–1966, wireless subscribers increased from 97,000 to 139,000 and television subscribers from 3,500 to 21,000. Qualitative improvements were effected to both wireless and television programmes and the number of programmes was increased appreciably. The construction of the Limassol radio relay station made possible a better coverage of the western part of the Island, while the two television relay stations, at Kantara and Troodos, provided television viewing to the whole of Cyprus. Among the qualitative improvements in T.V. programmes, the inauguration of the educational T.V. in 1966 may be cited. A total of about £250,000 was invested by the Cyprus Broadcasting Corporation during this period. The major sources of revenue of the Corporation are subscription fees and advertising. In 1966 expenditure amounted to £368,000 and revenue to £241,000. Thus, the Corporation is not yet financially self-supporting.

7.3.2 Future Development

For the Second Five-Year Plan total investment is anticipated to rise to about £800,000. This is expected to be financed upto 50 per cent from the Corporation's own resources and the balance from internal and external sources. The projects planned for execution involve : extension and improvements to coverage ; extension and improvements to programme production facilities ; better coverage of outside events ; extensions to buildings ; and new equipment.

More emphasis will be given on informative, educational and cultural programmes.

CHAPTER 12

TRADE

1. The Role of Trade

In previous chapters of this Plan reference has been made to the rapid development of trade (and more specifically of foreign trade) during the post Second World War period. Imports, for example, which in the 1930's were about equal to exports, had by 1963 exceeded exports by more than 100 per cent. The importance of trade lies in the role it plays in shaping the balance of payments and in its contribution to Gross Domestic Product and employment. But trade can also be used as an instrument to promote desired structural changes in the economy.

2. Contribution of Wholesale and Retail Trade to Gross Domestic Product and Employment

The contribution of Wholesale and Retail Trade to Gross Domestic Product and employment is significant. In both 1961 and 1966 the share of this sector to Gross Domestic Product was about 15 per cent. In 1961, 7.2 per cent of the gainfully employed were in Wholesale and Retail Trade. By 1966 this ratio increased to 9.1 per cent.

3. Progress and Policies during the First Plan Period

3.1 Merchandise Trade, 1962–66

The growth in foreign trade during the First Plan period was quite substantial. Exports were increasing at an annual rate of 11.7 per cent and imports at 7.4 per cent. As a result, the trade gap was contained within reasonable limits.

3.1.1 Domestic Exports

The performance in the export field during 1961–66 is illustrated by Table 1.

TABLE 1

Structure of Domestic Exports, 1961–1966(1)
(£mln.)

	Total Domestic Exports	Agricultural Products	Minerals	Percentage Share in Total Exports	
				Agricultural Exports	Mineral Exports
1961	15.8	7.1	8.4	44.9	53.2
1962	18.2	10.3	7.7	56.6	42.3
1963	19.4	11.7	7.4	60.3	38.1
1964	17.9	10.3	7.1	57.5	39.7
1965	23.1	13.6	9.2	58.9	39.8
1966	27.2(1)	14.4	12.2	52.9	44.9

Source : Compiled by the Planning Bureau on the basis of data obtained from Import and Export publications of the Statistics and Research Department.

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(1) Minor discrepancies in the value of exports of Table 1 and corresponding estimates of exports in the Balance of Payments section are due to differences in definition and coverage.

The dominant categories in domestic exports are agricultural (manufactured or exported in raw form) and mineral products, which together account for almost 98 per cent of total exports. Traditionally, mineral exports comprised the biggest single category, 53.2 per cent in 1961. Despite the rather high prices secured by minerals during 1965 and 1966, the very rapid expansion in agricultural exports led to an inversion of positions on the export list. By 1966, agricultural exports accounted for about 53 per cent of total domestic exports and minerals had dropped down to about 45 per cent. Agricultural exports went up by about 102 per cent.

3.1.2 Imports

As a general rule, small economies like Cyprus, with a limited resource potential, have to depend on imports for a wide range of consumer goods, raw materials and capital goods. This is one explanation for the high per capita imports of Cyprus during recent years. Other reasons are to be found in the high propensity to import (which again is largely due to the fact that the development of the import trade has conditioned the Cypriot consumer to European standards and qualities), the rapid growth in incomes and the existence in the Island of import-biased consumers (*e.g.* British forces and their families, UNFICYP etc.). However, analysis of the composition of imports indicates a healthy trend. Thus, as Table 2 shows, the share of capital goods and raw materials was increasing and that of consumer goods was decreasing. But the proportion of consumer goods imported (46.7 per cent in 1966 (¹)) is still high and indicates that the margins for import-substitution may still be wide. Some import-substitution should also be possible in the case of raw materials and capital goods. On the other hand, the growing share of capital imports is a reflection of the rapid growth in fixed capital formation.

Imports by Economic Destination, 1961 and 1966 (f.o.b.)

TABLE 2

Category	Value (£mln.)		Percentage Share in Total	
	1961	1966	1961	1966
Capital Goods ..	4.7	8.7	14.0	18.1
Raw Materials (excl. Fuel)	10.5	16.9	31.2	35.2
Consumer Goods (incl. Fuel)	18.4	22.4	54.8	46.7
Total ..	33.6	48.0	100.0	100.0

Source : **Statistics and Research Department.**

(¹) **Including fuel.**

3.2 Commercial Policy

During the period of the First Plan a policy of liberalization of import controls was pursued so that at the present time there is a very limited number of commodities on the list for which an import licence is required. At the same time reliance was placed on the use of the tariff for protection or for balance of payments purposes, and a policy of non-discrimination in foreign commercial relations was followed. In line with this policy of non-discrimination and gradual dismantling of trade barriers, Cyprus became a contracting party to the General Agreement on Tariffs and Trade (GATT). At the same time, however, in virtue of her membership of the Commonwealth, Cyprus retained the Commonwealth preferential system which has facilitated her exports especially to the U.K. market.

3.2.1 Tariff Amendments

Tariff changes effected during this period were largely designed to encourage local industry and production through an increase in the duty of imported competing articles or the reduction of the duty on a wide range of raw materials and capital goods.

The success of these measures is reflected in the expansion of domestic manufacturing output and corresponding import-substitution (see Table 3). In practically all cases, the rate of increase of domestic production was higher than that of total consumption and the tariff change (as reflected by customs revenue collected). Thus, the response to an 18 per cent increase in customs duties is represented by a 30 per cent increase in domestic production, 16 per cent increase in imports, 25 per cent in consumption and a 27 per cent increase in exports. The impact varied from category to category the most favourable being in the group of food and beverages and capital and durable consumer goods.

Customs Duties and their Impact on Domestic Production and Trade

(*Index* 1962–1965, 1962=100)

TABLE 3

	Food & Beverages	Industrial Supplies (Non-food)	Capital Goods	Consumer Goods (Non-food)	Goods Not elsewhere stated	All Goods
Customs Revenue ..	120	125	112	120	30	118
Merchandise Imports ..	113	114	131	112	120	116
Domestic Production ..	132	124	189	126	—	130
Consumer (Apparent) ..	129	118	134	119	123	125
Exports	133	120	11	166	84	127

Source : Planning Bureau.

3.2.2 Bilateral Trade Agreements

To enable an expansion and diversification of trade to take place, a number of bilateral trade agreements were concluded. Such agreements have been signed with West Germany, Yugoslavia, Greece, Turkey, Syria, Lebanon, Israel, U.A.R., Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Roumania and the U.S.S.R. Of these agreements the first eight involve open import licence treatment and payments in freely convertible currency. The latter seven are of a clearing type.

These agreements (particularly the clearing type) have opened up new export outlets for certain products (e.g. raisins and zivania(¹)), have increased the volume of exports and diversified markets, especially for citrus, juices, wines, hides and skins, potatoes, tobacco, footwear and clothing. In 1961 exports to these countries amounted to £0.8 million. By 1966 they rose to £3.2 million. At the other end, imports rose from £1.1 million in 1961 to £3.3 million in 1966. However, despite the agreements, the proportion of trade conducted on a bilateral basis is small. In 1966, it represented 11.8 per cent of the value of total domestic exports and 6 per cent of the value of imports(²).

3.2.3 Other Export Promotion Measures

A series of other measures were also taken in order to promote exports. Thus, the produce inspection service was strengthened and the regulations governing quality, packaging etc. were strictly enforced. Trade delegations were sent abroad and research into export markets was carried out. Foreign importers were invited to Cyprus and advertising and publicity was stepped up. Cyprus also participated in a number of international exhibitions and fairs. In parallel, an effort was made to improve marketing arrangements and two marketing boards were set up for potatoes and carrots.

4. General Objectives of Trade Policy

The basic objective of trade policy is to enable the attainment of a structurally sound balance of payments which will depend to a much lesser extent on unstable sources of foreign exhange earnings. This will be achieved by—

(*a*) promoting exports and giving priority to investment in manufacturing and agricultural activities with an export potential, including such activities as tourism, which bring in invisible earnings ;

(*b*) the adoption of measures and policies designed to improve the competitiveness of export commodities ;

(¹) Raw grape alcohol.

(²) Valued at c.i.f. prices.

(*c*) the improvement of the internal and external marketing channels ;

(*d*) the expansion of existing markets and the tapping of new ones ; and

(*e*) the reduction of imports through a policy of import-substitution, provided that local industries and activities thus encouraged are economically viable in the long run ;

5. Policy and Targets of the Second Plan

The general lines of policy as worked out and followed during the First Plan period will be continued. However, as indicated in the Chapter on Manufacturing, there will be an important change of emphasis in the Second Plan. There will be a shift in favour of exports. Although the policy of import-substitution will be continued, a gradually heavier emphasis will be placed on export promotion. Furthermore, if the various economic magnitudes do not behave as forecast in the balance of payments, there may be a need for import restrictions so as to contain the trade deficit within acceptable limits.

The export and import prospects have been determined, and the targets have been set (see summary in Table 4) in the light of the general objectives of trade policy, and the domestic production possibilities of the next five years. Despite an expected doubling in agricultural exports, the trade gap is likely to widen further in absolute terms primarily because of the growth in imports and the small reduction in mineral exports. However, as a percentage of the total value of foreign trade the gap will be reduced from 27 to 21 per cent.

Merchandise Trade in 1966 and 1971
(£mln.)

TABLE 4

	1966	1971
I.—Merchandise Exports (f.o.b.) (1)	27.6(1)	42.3
(*a*) Minerals	12.2	11.7
(*b*) Agriclutural Products	14.4	27.9
(*c*) Other	1.0	2.7
II.—Merchandise Imports (f.o.b.)	48.0	65.3
(*a*) Capital Goods	8.7	16.0
(*b*) Raw Materials (excl. Fuel)	16.9	21.7
(*c*) Consumer and Other Goods (incl. Fuel)	22.4	27.6
III.—Trade Deficit	—20.4	—23.0

Source : Planning Bureau.

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(1) Balance of Payments definition.

5.1 Exports

5.1.1 Mineral Exports

Between 1962 and 1966 the prices of mineral exports had risen by about 16 per cent. It is anticipated that the present level of copper prices may not be maintained; nor is it expected that their volume will be increased. Therefore, for planning purposes, it has been assumed that the value of mineral exports will be reduced from £12.2 million in 1966 to £11.7 million in 1971.

5.1.2 Agricultural Exports

The target is to raise the level of agricultural exports from £14.4 million in 1966 to around £28 million in 1971. This high target is thought to be feasible in view of the anticipated rapid expansion in agricultural production explained under Agriculture. Details about export prospects for individual crops have been given in the Chapter on Agriculture. Agricultural exports are defined to include all plant and animal origin exports, irrespective of whether they are manufactured or are in raw form. In 1966 only 30 per cent of agricultural exports were processed or manufactured. They included wines and spirits, raisins, juices, hides and skins, and kibbled carobs. The other 70 per cent consisted of raw materials. The main contributors to agricultural export targets will be citrus, potatoes, grapes, wines and spirits, carobs, tobacco and early vegetables.

5.1.3 Exports of Manufactured Goods (Non-Agricultural Origin)

As Table 5 shows, these exports are negligible at the moment, but they should be increasing in importance over time.

Exports of Non-Agricultural Origin Manufactured Products, 1966 and 1971

TABLE 5 **(£mln.)**

	1966	1971
Textiles—Clothing and Footwear	0.1	0.6
Metal and Metal related Industries	—	0.5
Other	0.6	1.2
Total	0.7	2.3

Source : Planning Bureau.

5.2 Imports

The accelerated development of the country will necessarily entail a substantial increase in imports. Import targets for 1971 are consistent both with the policy of effecting a gradual restructuring of the economy and the needs of a rapidly growing economy and a rising standard of living.

Merchandise imports (fob) are forecast to grow at a rate of 6.3 per cent per year and will rise from £48 million in 1966 to around £65 million in 1971.

The consistency of the import targets with the objective of restructuring the economy is seen in Table 6, which indicates a gradual shift from imports of consumer goods in favour of imports required for expanding the productive capacity of the economy.

TABLE 6 **Imports by Economic Destination, 1966 and 1971 (f.o.b.)**

	Percentage Share in Total	
	1966	1971
Capital Goods	18.1	24.5
Raw Materials (excl. Fuel)	35.2	33.2
Consumer and Other Goods (incl. Fuel)	46.7	42.3
Total	100.0	100.0

Source : Planning Bureau.

Thus, the share of imports of capital goods will increase from 18.1 to 24.5 per cent and that of consumer goods will drop from 46.7 to 42.3 per cent. The share of raw materials will decline slightly but in absolute terms their value will increase from £16.9 million in 1966 to about £21.7 million. Likewise, the target for reducing the share of consumer goods does not mean an absolute reduction. On the contrary, these goods are anticipated to grow from £22.4 million to £27.6 million. This is because a rising standard of living entails consumption of a wider variety of goods some of which Cyprus cannot produce at this stage of its development.

It should be stressed that the import projections are valid only subject to the realization of Plan targets regarding investment, Gross Domestic Product, consumption, import-substitution, exports, etc. If unpredictable factors prevent export targets from being realized or if the scaling down of earnings from foreign military sources proceeds to a greater extent than anticipated in the Plan, it might become necessary for the Government to take further steps to restrict imports.

5.3 Contribution of Trade to Gross Domestic Product and Employment

Value added by the trade sector (wholesale and retail trade) is envisaged to increase from £20.9 million in 1966 to about £31 million in 1971.

Between 1961 and 1966 employment in wholesale and retail trade grew from 15,800 to 20,900 persons. By 1971 this sector is likely to require an additional number of about 4,000 persons.

6. Measures to Attain the Objectives and Targets of the Plan

6.1 Expansion in Production

An increased volume of exports presupposes increased production. The Chapters on Agriculture and Manufacturing Industry have indicated that it is possible to achieve a 50 per cent increase in agricultural production and a 61 per cent increase in manufacturing output.

6.2 Export Promotion

The disposal of exportable production entails intensive marketing and market promotion activities. Moreover, in some products competition is keen and will probably become keener in the future in view of the Kennedy Round Agreement and in the event of the United Kingdom joining the Common Market. Timely and systematic action to face all eventualities will be necessary. In view of the great importance which Government attaches to export promotion, an Export Advisory Council will be set up, whose functions will include :

(*a*) systematic study of foreign markets ;
(*b*) supply of information to local industries about foreign market potentialities ;
(*c*) coordination of publicity effort ;
(*d*) advice on measures to improve quality standards, packaging etc. of export products ; and
(*e*) advice on any incentives or facilities required to promote exports.

At the same time, advertising campaigns, market research, trade delegations, participation in international fairs, invitations to existing and potential importers of Cypriot products to visit local factories, farms and processing plants will be continued and further improvements to general marketing arrangements will be studied.

Development funds allocated to this sector amount to £800,000 although not all this is for export promotion purposes. About £300,000 will be used for financing a permanent trade fair in Cyprus.

6.3 Marketing

As mentioned in the Chapter on Agriculture, the Government recognized from the outset the important role which marketing should play and among other measures taken during the First Plan period was the establishment of two marketing boards to improve export marketing for potatoes and carrots. In the case of certain other products (milk and dairy products, meat and olive oil) the existing marketing arrangements appear to be unsatisfactory and it is proposed during the period of the Second Plan to rationalize these arrangements and place the marketing of these products, which are of great economic significance, on a sounder basis. There is also scope for improvement in other directions and in view of the necessity to reduce costs and increase efficiency in order to enable the delivery of goods to their destination at the right time and with the right price, the Government will keep marketing under constant review.

7. Cooperative Marketing

The role of the cooperative movement in the marketing of Cyprus products, both locally and abroad, has been significant. Whereas most cooperative marketing and processing associations have been established in order " to protect the interests of the farmers ", their establishment has gradually enabled improvements to take place in the stabilization and development of marketing channels ; it has also helped in the better grading and standardization of Cyprus products.

Number and Membership of Greek Cooperative Societies, 1960 and 1966(1)

TABLE 7

	Number of Societies		Membership			
			Individuals		Societies	
	1960	1966	1960	1966	1960	1966
Marketing Societies	11	54	2,409	7,260	—	—
Marketing Unions	8	12	5,868	11,900	233	576
Supply Societies	5	7	591	2,786	—	—
Supply Unions	3	3	—	—	345	358
Consumer Stores	297	322	55,430	69,758	—	—
Producers Societies	2	2	80	72	—	—
Cooperative Farms	6	6	311	311	—	—
Wine Making	5	10	686	1,090	—	—
Oil Pressing	14	14	2,164	2,234	—	—
Carob Federation	1	1	—	—	5	5
Savings Banks	27	41	12,398	22,000	—	—
Other	10	73	1,172	2,500	27	45
Total	389	545	81,109	119,911	610	984

Source : Department of Cooperative Development.

Table 7 indicates the development of the cooperative movement during 1960–1966, particularly in the field of marketing of agricultural products and consumer societies and stores. In the case of agricultural products, cooperative marketing societies or unions cover a large part of production, e.g. 90 per cent of tobacco, 60–65 per cent of carobs, 80 per cent of olive oil and about 65 per cent of citrus. At the same time there is a wide network of consumer stores especially in villages. During the Second Five-Year Plan, the Cooperative Movement is planning to expand further. In view of its wide network of activities, it is facing administrative and other problems and is proposing to establish training programmes to strengthen the staff competence of the movement.

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(1) (*a*) Data are given for the Greek Cooperative Movement only because no data were available, after 1963, for Turkish Cooperatives.

(*b*) Data do not include Cooperative Central Bank.

It should be pointed out, however, that the establishment of marketing boards or cooperative marketing associations does not automatically solve marketing problems. Very often such marketing bodies, in their attempt to serve the interests of their members, fix prices higher than the levels warranted by market conditions. The result is to create surpluses. More attention should be paid to this aspect of the problem and prices fixed by marketing organizations should be flexible enough to reflect market trends and conditions.

8. The European Economic Community

The strategy of the Plan to increase the efficiency and competitiveness of the Island's economy and to achieve a diversification in exports should be considered against the background of developments in Europe—the establishment of the European Economic Community (E.E.C.) and the United Kingdom's declared intention to join the Community.

TABLE 8

Percentage Distribution of Domestic Exports, 1961–1966

	1961	1962	1963	1964	1965	1966
U.K.	34.7	45.9	40.4	40.8	31.0	32.2
E.E.C.	37.6	30.2	31.9	30.5	32.9	32.7
Rest of the World	27.7	23.9	27.7	28.7	36.1	35.1
Total ..	100.0	100.0	100.0	100.0	100.0	100.0

Source : Compiled by the Planning Bureau on the basis of the Import and Export publications of the Statistics and Research Department.

As will be seen from Table 8, domestic exports to the U.K. ranged between 31 and 45.9 per cent during 1961–66. On the other hand exports to E.E.C. countries ranged between 30.2 per cent and 37.6 per cent. The share of other countries (mainly Eastern European) was on the increase. What is more significant, however, is not the share in the market but the composition of products entering each market. A large proportion of the trade with the E.E.C. consists of minerals. In the case of exports to Britain (1), minerals accounted only for a small part (7 per cent in 1966), whereas the bulk consisted of agricultural raw materials and processed products which are likely to face increased competition from E.E.C. member countries. Agricultural exports to Britain have been declining in relative terms, but in absolute terms the U.K. is still the largest single market for Cyprus agricultural products. It absorbed about £8.0 million out of £14.4 million in 1966.

The entry of Cyprus products to the British market has been facilitated by the existence of the Commonwealth preferential margin. If this margin is reduced or eliminated overnight, without other compensatory arrangements having been made, the effect on Cyprus trade and the economy in general will be particularly serious. It is not known whether the U.K. will finally join the Common Market and, if so, under what conditions ; nor is it possible to anticipate under what arrangements Cyprus may be able to secure association with the Common Market. It is expected that in the event of Britain's entry it may be possible to safeguard, at least for a transitional period, the interests of Commonwealth countries, but in the meantime the effort to create a competitive economy and to diversify the export trade is a policy in the right direction.

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(1) Other parts of the Commonwealth absorb a negligible proportion (£0.4 million in 1966).

CHAPTER 13

TOURISM

1. Tourist Development in the Post-War Years

The post-war period has witnessed an unprecedented rise in world travel and the indications are that this trend will continue. Total world tourist receipts in 1965 reached 11.6 billion dollars for international tourism and have been estimated at around 43 billion dollars for domestic tourism (¹). Rising incomes, automobile travel, increased leisure, cheapening of air fares and the introduction of chartered flights have been responsible for this expansion of the tourist trade which has provided a valuable source of income and a welcome support to the balance of payments of many countries. Unfortunately, Cyprus has not been able to obtain its fair share in this trade because, as the following table indicates, the fortunes of the tourist industry were closely linked with the abnormal political situation prevailing in the Island.

TABLE 1

Number of Tourists Arriving in Cyprus, 1951–1966

Year	Temporary Visitors (1)	Persons in Transit (2)	Total (1)+(2) (3)	Less than one-day Visitors (4)
1951	n.a.	n.a.	22,842	n.a.
1952	n.a.	n.a.	27,206	n.a.
1953	n.a.	n.a.	26,838	n.a.
1954	n.a.	n.a.	32,633	n.a.
1955	28,426	3,728	32,154	n.a.
1956	11,154	1,850	13,004	n.a.
1957	10,109	1,278	11,387	n.a.
1958	9,657	1,452	11,109	35,851
1959	19,642	1,434	21,076	45,833
1960	24,254	1,529	25,783	60,951
1961	38,396	1,744	40,140	66,085
1962	48,055	2,122	50,177	85,931
1963	70,373	4,246	74,619	81,396
1964	13,307	2,777	16,084	64,484
1965	29,977	3,269	33,246	84,713
1966	51,139	2,975	54,114	88,452

Source : Economic Report (Revised Series), Statistics and Research Department.

But although the internal situation has not been conducive to the rapid and steady development of the tourist industry and the transformation of the Island into an international tourist centre, whenever normal conditions prevailed, the rate of tourist expansion was quite satisfactory ; and this performance was achieved in spite of the existence of a number of retarding factors. For example, the position of the Island

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(¹) " Tourism Development and Economic Growth "—issued by O.E.C.D. 1967, page 7.

in the Eastern corner of the Mediterranean made it rather expensive as a holiday centre for the average European tourist. The journey by sea was lengthy and time consuming. Cyprus lacked a modern port to cater for cruise travellers. Sport and recreation amenities were also inadequate. But it seems that the operation of these factors did not impede the development of tourism whenever normal conditions prevailed. The search for the sun, the desire of visitors to discover new lands, to travel " off the beaten track ", the climate and the natural beauty of Cyprus were sufficient to outweigh the constraints. Thus, between 1951 and 1954 the number of tourists increased by over 40 per cent. In the following years the reduction of British garrisons in the Middle East, the struggle against colonial rule and the emergency conditions which prevailed had the effect of reducing the traffic to a mere trickle and this situation continued until 1959. Independence and return to normality brought about a revival ; and with the tourist promotion effort made during the period of the First Plan it was possible not only to reach the highest level ever attained in the past, but to surpass it by more than 100 per cent. The political anomaly since the end of 1963 has again had its adverse effects on the industry, but with the improvement of the situation, the industry has picked up and recovery appears to be on the way.

2. Measures to Promote Tourism during the First Plan Period

As already stated in Chapter 2, one of the basic objectives during this period was to assess the Island's tourist potential, to identify priority areas for development, and to prepare an action programme. A general survey was accordingly carried out by a team of tourist experts and town planners which was subsequently supplemented by an economic study. To facilitate improvement, extension and construction of hotel accommodation a sum of £600,000 was made available by Government in the form of low interest long-term loans. Other concessions to the industry were also offered (e.g. duty free importation of certain categories of hotel equipment and appliances) as well as technical advice and assistance. As a result, hotel accommodation expanded by about 40 per cent—from 4,306 beds in 1961 to 6,020 beds in 1966. Four tourist pavillions were built, a Tourist Centre was established in London and a Hilton Hotel was erected (with a 300 bed capacity) at a cost of about £1.4 million. At the same time substantial expenditure was incurred on tourist publicity and promotion. To enable the training of personnel needed by the industry, a Hotel School was established and a large number of scholarships were awarded to Cypriots to study in the hotel schools of Greece, Switzerland and Scotland. Other infrastructural projects, carried out in the meantime (e.g. road and port development), had a beneficial effect on the development of the tourist industry. In this connexion mention could be made of the very satisfactory progress made in the field of excavation, preservation and reconstruction of ancient monuments.

3. The Importance of Tourism

Developing countries embarking on development programmes are usually faced with mounting requirements for foreign exchange; and at the same time with the problems of improving their human skills and adapting the structure of their economies to the needs of accelerated growth. For such countries, as an O.E.C.D. study has observed(1), " tourism offers a major opportunity. It stimulates investments, provides a means of earning foreign exchange and is a source of employment. It is also an impetus to social change—both directly, through developing education and training to meet the needs of a service industry, as well as indirectly, by introducing different social habits and patterns ". More particularly, in the case of Cyprus, tourism is not only one of the means for ensuring a diversification and restructuring of the economy, but also of offsetting the foreign exchange losses anticipated from the running down of foreign military forces.

4. Prospects and Targets for the Second Plan

4.1 Prospects

It was mentioned at the beginning of this Chapter that a number of factors had operated in the past to retard the rate of growth of the tourist industry. In spite of the progress made during the preceding five-year period, many of these bottlenecks and deficiencies are still present, but this is no reason why it should not be possible with concerted action and determined effort to make such strides forward as to elevate the Island by the end of the Second Plan period to the position of being an international tourist centre in direct competition with the traditional tourist markets.

Tourism has become a very competitive industry, but Cyprus has a comparative advantage in this field and has all the prerequisites which might enable it to develop into a popular holiday resort. For the Near Eastern tourist, Cyprus can offer cooler mountain resorts. For the Western European and the American it can offer excellent beaches, and a chequered history which is reflected in excavations, historical monuments, monasteries, and old churches. The cruise traveller who wants to spend only a few days in any one place will find the position of Cyprus very convenient. For the organized tour tourist, Cyprus can offer varied scenery and a composite of modern and ancient life. Winters are mild, the sunshine regular, and the summers are tempered by the Mediterranean sea. Thus, the Island's climate should allow for the development both of winter and summer tourism.

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(1) **" Tourism Development and Economic Growth ", 1967, page 8.**

Tourism is also an industry very sensitive to non-economic influences and its development is, therefore, more difficult to predict. However, assuming that the internal situation will continue improving, the prospects of accelerating the growth rate of the tourist industry during the Second Plan period are promising. And such prospects should be further enhanced following the devaluation of the Cyprus pound.

4.2 Targets and Policies

4.2.1 The Main Targets and Policies of the Plan Are :

(*a*) To attain an annual average rate of growth in the tourist traffic of about 25 per cent. If this pace of expansion is achieved, it will mean that the number of tourists (other than one day visitors and visitors in transit) in 1971 will be about 160,000 (as against 51,139 in 1966).

(*b*) To take measures conducive to an increase in the average length of stay and the expenditure per tourist.

(*c*) To formulate and implement a tourist promotion policy and to take such other steps as will facilitate an extension of the tourist season and improve the seasonal pattern of tourism.

(*d*) In encouraging tourist investment to give priority to those areas which are likely to bring about higher and quicker returns.

(*e*) To encourage tourist investment in those other complementary facilities in which Cyprus is particularly lacking.

(*f*) To introduce such legislative and institutional changes as will enable the accelerated and unhindered development of the industry.

4.2.2 Type of Tourist Expected in Cyprus

A tourist plan must rest on certain basic assumptions regarding the nature of tourist traffic that is expected or that it is sought to attract. It is one thing if it is envisaged to turn the Island into a haven for rich travellers and millionaires ; it is quite another if one is thinking in terms of camping sites for nature-lovers or simply persuading more people to stop off a day or two during their Mediterranean cruise. In the case of Cyprus the future of tourism appears to rest with the increase of middle-class and other non-luxury travellers—the kind who have contributed so much to the expansion of tourism in Western Europe. This traffic is now moving eastwards ; it has spread to Greece and it is going beyond, attracted largely by the sun and favourable climate. Cyprus can appeal to two main types of this category of traveller ; the cruise type who likes to move around and to visit several countries, and is willing to devote a few days of his itinerary to Cyprus ; and the more settled traveller, who wants to go somewhere for a holiday and relaxation. The increase in both types is being encouraged not only by rising incomes in Western Europe and elsewhere, and a strong propensity to travel, but also by fare reductions, particularly for all-inclusive tours and charter flights. It will no doubt always cost rather more to go to the eastern Mediterranean from Western Europe than to more familiar places nearer home, but more and more people have the means to do it and enjoy the experience of something new and unknown.

As facilities in the Island are developed it may be expected that a growing proportion of the total number of visitors will consist of people who come mainly or exclusively to Cyprus. The Island itself will be the main attraction, and the possibility of short visits to other places a subsidiary one.

A further basic premise is that tourists who come for more than a short stay are attracted principally to the beaches and that this is where the emphasis of the development effort should be concentrated—in erecting hotels on or near the beaches and along the coast, improving and developing the beaches themselves, and providing all the additional sports, recreational, and other facilities that are a normal feature of holiday resorts. Tourists coming for only a few days will no doubt spend more time in Nicosia and other towns, as a base for visiting areas of interest, including the antiquities.

The special problem of the hill resorts must be mentioned. The fact has to be faced that in the next few years one cannot forecast with much confidence a rapid growth of foreign tourism in this region for the very reason that, for the time being at least, there exists this marked preference for the coast. A season of barely three months, with very little traffic the rest of the year, presents problems for the hotel industry in the hill resorts. This is not to say that there are no ways and means of extending the season and otherwise resuscitating tourism in the hill resorts.

Finally, and following from the kind of tourist expected, it is reckoned that the primary need in the next few years is for good first-class hotels—not luxury ones, but modern hotels that have a bath or shower in every room and suit the needs of the middle or upper-middle class traveller. At a later stage, when Cyprus as a holiday resort is firmly on the map, there would be a growing need for more diversified accommodation, including motels, camping, family chalets, chains of villas and more modest hotels, but what Cyprus lacks most for the immediate future, and what must be provided if the prospective tourists are not to be lost, is sufficient classical type hotels.

4.2.3 Projection of the Tourist Traffic

Forecasting the future growth of tourism, always difficult, is particularly difficult now in Cyprus, firstly because of the political anomaly and, secondly, because, as has already been explained, the traditional patterns are now undergoing change. However, on the basis of the studies carried out and on certain assumptions, an annual rate of growth of 25 per cent has been adopted.

Table 2 summarizes the projections for all categories of visitors.

TABLE 2

Tourist Traffic, 1966 and 1971

	Temporary Visitors (1)	Visitors in Transit (2)	Total (1)+(2) (3)	Less than one-day Visitors (4)
1966.. ..	51,139	2,975	54,114	88,452
1971.. ..	160,000	9,600	169,600	132,240

Source : Planning Bureau.

4.2.4 Average Length of Stay ; Average Expenditure per Head ; Prospective Foreign Exchange Earnings

Future earnings from tourism depend on the number of tourists and the average expenditure per head. The latter depends largely on the average length of stay. Such statistical information as is available indicates that in recent years the average length of stay has been around 8 days. For the Plan period it is assumed that the average length of stay will increase slightly and this because of the increasing proportion of tourists from England, Scandinavian and other Western European countries who tend to stay longer than the average tourist. Similarly, expenditures per tourist which have been estimated for the recent past at about £65 (£3 for one-day visitors) are also expected to show some increase on account of the assumed increase in the average length of stay, the devaluation of the Cyprus pound and a diversification of the opportunities for local spending.

On the basis of these assumptions, earnings from tourism are expected to increase from £3.6 million in 1966 to £11.6 million in 1971.

4.2.5 Regional Distribution of the Tourist Traffic

The point has already been made that the bulk of the future tourist traffic will be attracted principally to the beaches ; and that extensive beach development should, therefore, be the cornerstone of the tourist development policy during the period of the Second Plan. This is in line with one of the basic objectives of the Plan, that the emphasis in investment should be placed in those areas which are likely to produce high and quick returns. Studies already carried out suggest that the Famagusta coastal region as well as Kyrenia and its coastline appear for the moment to have the highest tourist potential, but this does not mean that the development of other regions (coastal or mountain) should be abandoned. The value of these studies is to enable a ranking of priorities to be made and to indicate where the emphasis should be placed. But even within the two priority regions themsleves the need for establishing a scale of priorities arises. Development cannot proceed simultaneously over the whole region. Initially it will have to be concentrated in the neighbourhood of the two towns which are already equipped with some tourist amenities. It is the proximity of these urban centres which facilitates a combination of speedy development with quick returns.

For planning purposes, therefore, it has been assumed that during the next few years the bulk of the additional tourist traffic will be concentrated in the Famagusta and Kyrenia regions, followed by Nicosia and the rest of the country (Hill Resorts, Limassol, Larnaca, Paphos). Such a distribution is justified not so much on the basis of past trends as on the basis of future forecasts.

Internal tourism also is expected to grow (the recent devaluation of the Cyprus pound will be an incentive for such growth) and the hill resorts are likely to be the main beneficiaries of this expansion.

5. Measures for Attaining the Plan Targets

5.1 Investment Requirements

Investment in the tourist industry will consist of investment in new hotel accommodation, in improvements and extensions to existing accommodation as well as investment in tourist facilities (places of entertainment and leisure, refreshment places, etc.) known as complementary investment.

5.1.1 Investment in New Hotel Accommodation

The needs in new hotel accommodation are determined by the volume of the expected tourist traffic, the length of stay, the regional distribution of the traffic, the accommodation already available, the assumed occupancy rate of hotels and the seasonal demand for accommodation. The question of the volume and distribution of the tourist traffic has already been examined as well as the question of the average length of stay. As regards available hotel accommodation, it has been assumed that foreign tourists will be accommodated in De Luxe, first and second class hotels and that local tourists will follow the 1963 pattern when about 50 per cent stayed in De Luxe, first and second class hotels. With regard to the occupancy rate, the U.N. Economic Survey in 1960(¹) estimated that the break-even point of Cyprus hotels was 60 per cent thus requiring a minimum of 70 per cent occupancy to secure a reasonable profit for hoteliers. However, by Cyprus conditions this is considered to be too high a ratio. Estimates made in the Planning Bureau since then suggest that the break-even point for Cyprus hotels should range between 45—50 per cent and, allowing for a reasonable profit margin, an occupancy rate of about 60 per cent would be needed. This latter ratio has been adopted for planning purposes. As for the seasonal pattern, it has been estimated that it would be uneconomic to plan for the peak because in such a case the average occupancy rate will fall below 60 per cent and hoteliers will fail to make a profit. An effort would have to be made to improve the seasonal pattern. The excess numbers at peak periods in certain regions might be diverted to other areas where there is room because of a different seasonal peak. Moreover, there is a certain flexibility in peak periods since, for example, extra rooms may be rented in private houses. There is also some promise that the seasonal pattern of bed-nights will improve as a result of the progress of winter tourism. In the worst case, the possible loss of foreign exchange through turning away some visitors would be far outweighed by the saving in outlays for investment in hotel capacity. The estimated investment requirements for new accommodation are £5.7 million.

5.1.2 Improvement and Extension of Existing Accommodation

The question may be posed as to the extent to which it would be advisable to meet the demand for accommodation by extending and improving existing hotels. That some of the demand would be satisfied in this way there is no doubt ; but it should be an aim of general policy to lay more emphasis on the building of new hotels. For one thing, new hotel accommodation will be needed in areas where the bulk of the traffic is likely to come. Also some of the existing hotels are not suitably located. Others are small in size and cannot cater for group travelling. New, functionally suitable and attractively located hotels will meet the tourist needs and will enable the establishment of higher standards. But, as already mentioned, investment funds will also be needed for improving and expanding existing accommodation. For the Plan period the total volume of this category of investment has been estimated at about £0.8 million.

(¹) U.N. " Cyprus—Suggestions for a Development Programme ", page 55.

5.1.3 Complementary Investment

Hotels alone are not enough ; there is an equally, if not more important, need for amusement, sports and recreation, restaurant and other facilities which tourists expect to find. Expenditure on such items falls under five main categories : (*a*) Beach development. (*b*) Entertainment and leisure (restaurants, cafes, night clubs, etc.). (*c*) Refreshment places (*e.g.* tourist pavilions). (*d*) Antiquities (preservation and improvement of places of tourist attraction, provision of car parks etc.). (*e*) Provision of facilities for picnics etc. This type of investment is known as complementary tourist investment. It is difficult to estimate the level of such investment, but for the purposes of this Plan it has been decided to adopt the estimate proposed by a group of foreign tourist experts and town planners which was later confirmed by a U.N. Economist formerly attached to the Planning Bureau (1). This amounts to about 50 per cent of the total investment in accommodation, (*i.e.* about £2.8 million for the five-year period), but it does not allow for the backlog which needs to be made up (and which has tentatively been put at another £2 million).

5.1.4 Total Investment in the Tourist Sector—Summary

The overall investment requirements during the Plan period have thus been estimated as follows :

	£mln.
Investment in New Accommodation	5.7
Improvements and Extensions	0.8
Complementary Investment	2.8
Allowance for the Backlog	2.0
Total	11.3

(Note : This investment includes the cost of land)

5.2 Government Investment and Development Expenditure

The Government, investment and development expenditure programme during the Plan period will be as in the following Table :—

Government Expenditure on Tourist Development during 1967–1971

TABLE 3

	£mln.
(*a*) Major Beach Development Projects	2.50
(*b*) Other Tourist Projects..	0.50
(*c*) Other (incl. Tourist Promotion, Administration, etc).	0.50
(*d*) Loans for Tourist Development	1.65
(*e*) Antiquities	0.35
Total	5.50

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(1) Mr. S. Fairmont, now economist with U.N.C.T.A.D.

It will be observed from this table that Government proposes to play a more active role in tourist development during the Second Plan period. Government has already decided to undertake itself the development of certain coastal regions with a high tourist potential and go to international tender for the future exploitation of such regions. Detailed feasibility studies for these areas have already been carried out ; and an amount of £2.5 million has now been earmarked for project implementation. At the same time, Government proposes to ask for international tenders for the development and exploitation of other state coastal areas which have been identified as suitable for tourist development. A number of foreign entrepreneurs have already shown interest in the development of state lands for tourist purposes and it is proposed to negotiate appropriate agreements on the basis of long-term leases.

Other developments will be undertaken, encouraged or financed in other parts of the Island including Troodos. A feasibility study for this mountainous area is now in course of being prepared and it is expected that it will be possible during the latter stages of the Plan to undertake implementation of a development project for this resort. The present state of thinking about Troodos is that it should be elevated to a major Recreation Centre of Mediterranean reputation by concentrating recreation and sport amenities to serve the whole mountainous resorts complex all the year round.

5.3 Private Tourist Investment—Inducements

Investment in tourism is only likely to take place on an expanding scale within a framework of general economic growth. The basic objective of the Plan is to establish such a framework of growth. At the same time, the Government will create a favourable climate for investment and will provide such specific financial and other inducements as may be necessary, without at the same time distorting the economy by giving preferential treatment to one particular sector.

5.3.1 Government Tourist Financing Scheme

The Government operates a tourist financing scheme the object of which is not only to provide additional sources of credit to supplement the amount of private capital available through normal banking and financial sources, but also to direct investment in accordance with the priorities indicated in the tourist plan. The scheme offers (through the Loan Commissioners) low interest long-term loans on the following lines : (*a*) up to 40 per cent towards the cost of construction of new hotels ; (*b*) up to 60 per cent towards the cost of construction of new hotels within the defined tourist zones ; (*c*) up to 30 per cent towards the cost of modernization and extension of existing hotels ; and (*d*) up to 25 per cent towards the cost of purchase of equipment. This scheme, which covers other tourist establishments as well, will be continued. Priority will be given to seaside resorts in accordance with the Plan's objectives and only limited funds will be made available for extensions. The scheme may, however, prove to be inadequate to stimulate the magnitude of the financing effort needed to implement the Plan targets. It may thus be necessary to devise ways and means whereby private financial institutions and the Cyprus Development Corporation may be able to play a more active part in private tourist investment financing.

5.3.2 Other Inducements

The scheme for the duty free importation of certain categories of hotel equipment and appliances will be continued and so will the training schemes for hotel employees. But perhaps the most direct inducement which the Government can offer private enterprise is to provide the infrastructure which must precede investment. Information concerning the infrastructural programme of Government during the Second Plan period is given in other Chapters of this Plan. What may be added here is that Government may decide in particular cases to undertake wholly or partly the initial expenditure for the installation of basic services (water supply, electricity, telephone) in undeveloped areas of tourist interest so that favourable conditions may be created for the potential investor. The Government will also take action to discourage speculation in land of tourist potential.

5.4 Employment Implications of the Plan

Assuming normal occupancy rates and on the basis of international standards the existing ratio of staff to beds will have to be improved. Two other factors will increase the demand for hotel staff : (*a*) the proposed reclassification of hotels which will tend towards a higher standard of service ; and (*b*) a large proportion of the staff presently engaged in the hotel industry belongs to an advanced "age-group" and replacement needs will be greater in the future. Taking into account the available statistical information, the immediate requirements of the industry may be estimated on the basis of the internationally accepted ratios of beds to employees, adjusted to Cyprus conditions, and assuming normal occupancy rates, as follows :

Category of Hotel	Number of Beds	No. of Persons Required
De Luxe and First Class ..	3,603	1,286
Second Class	1,059	302
Third Class	637	106
Fourth Class	721	103
Total	6,020	1,797

A special survey carried out in 1965 revealed that only 879 persons were working in hotel establishments ; the 1966 figure was 984. On the basis of the adjusted international ratios an additional 813 trained employees would, therefore, be needed to staff existing hotels properly. On the other hand, future accommodation expansion will concentrate mainly in De Luxe, first and second class hotels and it is expected that an effort will be made to adhere more strictly to international standards. On these assumptions, the additional employment requirements of the industry have been estimated as follows:

Additional Employment Requirements of the Hotel Industry, 1967–1971

TABLE 4

Number of Beds	3,221
Number of Employees Required ..	1,164
Requirements of Existing Hotels ..	813
Total Additional Requirements	1,977

5.5 Other Measures and Policies

(i) *Distance as a Factor in Tourist Development*. Distance represents an important element in tourist development. The bulk of the future tourist traffic of Cyprus will be airborne and the cost of the air fare will be an important consideration in promoting this traffic. In addition to the provision of modern airport facilities two things could be done : Firstly, a considerable number of tourists visit Cyprus on their way to other countries. This traffic, although not the dynamic element in tourism, is capable of being expanded significantly. Cooperative arrangements with other countries could do much to boost this transit traffic, especially the American. Secondly, the development of the "settled" visitor traffic will depend on the extent to which it will be possible to organise cheap chartered flights and cheap all-inclusive tours.

(ii) *Seasonality Problem*. Cyprus receives most of its visitors in July, August and September—August being by far the busiest month. Extension of the season will be one of the major long-term problems which will have to be tackled by the Government in cooperation with hoteliers and local organisations. Festivals, congresses, staggering of workers holidays, possible adjustment of school holidays, development of winter sports, local tourism should all be studied as a means of improving the seasonal pattern and the profitability of hotels.

(iii) *Recreation Amenities*. As already pointed out, one of the most serious bottlenecks is the absence of adequate recreation amenities. Although some encouraging developments have taken place already, there is still much to be done, and what is more important is that activities in this field should be properly organized and coordinated. High on the list of priorities are recreation centres at the following places : Golden Sands in Famagusta ; Pachyammos and Alakati in Kyrenia ; Near the Salt Lake in Larnaca ; Near the Lady's Mile in Limassol ; Troodos attraction centre.

(iv) *Sports*. Sport amenities are also inadequate. There are few tennis courts or swimming pools belonging to either hotels or private clubs and it is not easy for the mass tourist to use them. Golf courses are also lacking. Aqua sports are not developed and aqua sport instruction is not readily available. There are no organized trips around the coast. An effort to remedy these deficiencies will have to be made. Coast improvements will be carried out and the possibility of constructing pleasure harbours and marinas at selected seaside points will be examined.

(v) *Antiquities*. About £302,000 were spent on antiquities during the period of the First Plan. A provision of £350,000 has been made for the Second Plan to enable excavation and reconstruction work to proceed at an accelerated pace.

(vi) *Town and Country Planning*. Towns and, to a lesser extent villages, are the centres of tourist life and should be as attractive as possible. As explained in Chapter 10, a Town and Country Master Plan is currently under preparation which will enable the implementation of a coordinated physical development programme and which will lay down the framework for the embellishment of towns and villages. Certain regions of special tourist importance will be the subject of a thorough study. Beautiful and picturesque villages will be singled out and an effort will be made to preserve their unique architecture and the local colour.

(vii) *Internal Communications and Roads of Touristic Importance*. The programme for expanding and raising the standards of the road network will continue. As indicated in the relevant Chapter, a master plan for road development will be prepared and in this connexion the special needs of the tourist industry will be taken into account. Such tourist road projects as have been proposed from time to time (the " Crest " road traversing the Kyrenia range and the " Summit circuit " along the Troodos range) will be examined and if otherwise justified will be included in the Plan. Consideration will also be given to the possibility of expediting the completion of the road projects from Nicosia and Limassol to Troodos. A large number of taxis are now conducting a regular service between towns ; their existence will be brought to the notice of the tourists. Bus sightseeing also will be put on a proper footing in consultation with private enterprise.

5.6 The Legislative and Institutional Framework

(*a*) *Tourist Organization.* Experience during the First Plan period suggests that a powerful body capable of taking quick decisions is needed to carry out the heavy tasks imposed by the magnitude of the tourist effort. Legislation is being prepared for the establishment of an Independent Tourist Organization.

(*b*) *Legislation to protect tourist areas, etc.* Further legislative action will be taken to protect areas of tourist interest and to maintain the character of certain areas or villages. Some work has already been done in this sphere but there is still more to be done.

(*c*) *Classification of Hotels.* Under the Hotels Law, the licensing and classification of hotels is the responsibility of the Hotels Board. Consideration is being given to the desirability of making this Board a more expert body. The present classification of hotels will be re-examined with a view to adopting international standards. Classification of tourist establishments will also come within the ambit of the revised legislation.

(*d*) *Cleanliness.* The regulations governing cleanliness, sanitation etc. will be tightened up and the inspectorate will be strengthened so as to ensure strict observance of the Law. The Government will establish a modern hotel and tourism inspectorate.

(*e*) *Travel Agencies.* Travel Agencies have a very important role to play, but the stage has been reached when the functioning and operation of such agencies should be regulated by Law. A draft Bill has already been prepared.

(*f*) *Hotel Institute.* A flourishing tourist industry requires, inter alia, qualified hotel managers and catering personnel. Basic training in hotel service is already provided, but as mentioned in Chapter 4C (Population, Labour Force and Labour Requirements) an Institute for Hotel and Catering Personnel will be established during the early part of the Second Plan period to provide in addition training for management and supervisory staff.

CHAPTER 14

HEALTH

1. Introduction

There is at present a dual system of health services in Cyprus : (*a*) the Public Health Services administered by the Ministry of Health ; and (*b*) the Private Health Services comprising a large number of doctors who have their own clinics or hospitals and are in private practice. Within the latter category are included two or three private hospitals run by Mining Companies, offering medical treatment to their employees.

The Public Health Services provide medical treatment free of charge or at very reduced cost to all citizens certified as poor. However, medical treatment is also provided to members of the Civil Service, the Police, the Armed Forces, the Elementary and Secondary School Teachers and their families, to the inmates of the Reform School and the school for the Blind and the Deaf and to all children under the jurisdiction of the Welfare Department, i.e. those residing in Children's Homes, etc. In addition the Public Health Services offer medical treatment, at a commuted charge, to the monthly paid staff of the Water Boards of Nicosia, Famagusta and Limassol, the Cyprus Grain Commission, the Central Bank of Cyprus, the Cyprus Broadcasting Corporation, the English School, Nicosia and to the local staff of the Base Areas. The Private Health Services on the other hand are available to all citizens who can afford to pay for such services.

2. Progress during the First Five-Year Plan

2.1 General : Standard of Health

2.1.1 The standard of health in Cyprus is high ; so much so that it may be compared to that of many developed countries. Three main factors have been responsible for this : (*a*) the rapid economic growth which has enabled a continuous improvement in the standard of living ; (*b*) the gradually improving health services, preventive and curative ; and (*c*) the healthy climatic conditions of the Island. Table 1, appended below, compares the Cyprus standard of health with that of a number of other countries (U.K., France, Greece and Pakistan). The figures refer to the year 1965, with the exception of " Expectation of Life at Birth " which refers to different year periods (see notes). All rates refer to observations per thousand persons.

Salient Demographic Data Portraying the Standard of Health in Cyprus, U.K., France, Greece and Pakistan

TABLE 1

Country	Crude Birth Rate	Crude Death Rate	Infant Mortality Rate	Expectation of Life at Birth	
				Males	Females
Cyprus	24.4	6.1	27.6	68.0 (*a*)	73.0 (*a*)
U.K.	18.4	11.5	19.6	68.3 (*b*)	74.4 (*b*)
France	17.7	11.1	22.0	68.0 (*c*)	75.1 (*c*)
Greece	17.7	7.9	34.3	67.5 (*d*)	70.7 (*d*)
Pakistan	55.0	29.0	155.0	53.7 (*e*)	48.8 (*e*)

Source : U.N. Demographic Year Book, 1966.
Pakistan : The Third Five-Year Plan.

(*a*) For 1966. Estimated by the Ministry of Health.
(*b*) Average rate for years 1963–65
(*c*) For 1964.
(*d*) Average for 1960–62.
(*e*) For 1962.

Another indication of the high standard of health is the fact that none of the quarantinable epidemic diseases occurs in Cyprus ; moreover the common inflectious diseases have shown a marked decline and their incidence is steadily diminishing.

2.1.2 Generally speaking, the improvement of the medical and health services over the period 1962–1966 has been satisfactory. The inhabitant/doctor ratio stood at 1,300 persons per doctor in 1966 as against about 1,400 in 1961. The same is also true of the dentist/inhabitant ratio : 1 to 3,400 in 1966, as against 1 to 4,100 in 1961. It should be conceded, however, that these figures are still below the level of advanced European countries.

2.2 Public Health Services

Advancements during the first Five-Year Plan in the Public Health Service may be summarised as follows :—

(*a*) *Staff Improvements*

(i) *Recruitment of Additional Staff*. The available statistics show that a substantial improvement took place in the staffing of Hospitals and Rural Health Centres. The following is a comparative table of doctors and paramedical staff in 1966, 1961 and 1960.

Doctors and Paramedical Staff in the Public Health Services, 1960, 1961 and 1966

TABLE 2

	1960	1961	1966	Increase 1961–66 (Per cent)
Physicians (All Grades) ..	73	81	86	6.2
Specialists	13	20	24	20.0
Nurses (All Grades) ..	449	532	570	7.1
Dentists	9	11	15	36.4
Pharmacists	36	41	47	14.6
Midwives	37	56	67	19.6

Although the above increases in staff are in no way considered adequate, nonetheless the increased number of doctors and specialists made it possible to appoint certain specialist doctors to District Hospitals, thus relieving the pressure on the Nicosia General Hospital. This, coupled with increased visits to District Hospitals by other specialist doctors from the Nicosia General Hospital, e.g. paediatricians, radiologists, etc., has resulted in an improvement of the standard of services in District Hospitals. More qualified nurses and paramedical staff were also appointed to all hospitals.

(ii) *Training of Medical and Paramedical Staff*. A scholarship and training programme was drawn up providing for the post-graduate and specialised training of medical, dental, nursing and technical staff. Scholarships were financed directly by the Government as well as through offers made to the Government by foreign countries and international organizations. Thus, in total, 29 medical, 27 nursing, 2 dental, 18 technical and 4 other fellowships were granted for studies abroad. The Cyprus School of Nursing of the Nicosia General Hospital was reorganized and expanded in order to be able to accommodate more students and provide a better quality of training. The Cyprus School of Nursing now offers the following courses: (*a*) 3-years training leading to the Certificate of General Registered Nurse (G.R.N.); (*b*) 2-year courses for Assistant Nurses and Midwives and two-year courses in psychiatric nursing; (*c*) 3½-year courses for Community Health Visitors. This School has been recognized by the General Nursing Council for England and Wales as equivalent to the Nursing Schools operating in the U.K.

Due to the high standard of work carried out at the Nicosia General Hospital, the latter has been recognized by the Royal College of Physicians of England as an approved hospital for purposes of residential training of newly qualified medical graduates. The Nicosia General Hospital has also been recognized by the Royal College of Surgeons of Edinburgh as an approved hospital for purposes of training before admission to the Fellowship Examinations. Thus, the Nicosia General Hospital, though not a teaching hospital, has become a recognised centre for the training of general practitioners.

(*b*) *Improvements and Extensions to Hospitals*

A hospital building programme was undertaken during the 1962–1966 period designed to increase bed-accommodation in the general and specialised hospitals and at the same time to improve the existing facilities and services for treatment. Thus, two new wards were added to the Nicosia General Hospital, a new psychiatric unit and a New Psychiatric Hospital were built at Athalassa and a psychiatric wing was added to the

Nicosia General Hospital. A modern building to accommodate the physiotherapy unit was also constructed in the precincts of the Nicosia General Hospital. In order to improve the public health services in the rural areas old-fashioned Dispensaries and Cottage Hospitals were replaced by 9 new Rural Health Centres, which are usually staffed by a general practitioner, a health inspector, a nurse, a midwife or community health visitor and a pharmacist.

As a result of all these construction programmes, the number of available hospital beds increased significantly over the 1962–1966 period. In 1961 the total number of beds were 1,624 or 2.82 per 1000 of the population while in 1966 they increased to 1,883 or 3.14 per 1000 of the population.

The capacity of hospitals to treat in-patients and out-patients has improved and so has their equipment. The immediate tangible result has been that the Government Hospitals were enabled to extend treatment to an increased number of patients as follows :

	1960	1961	1966
In-Patients	20,401	21,851	26,401
Out-Patients	660,114	772,243	828,195

(c) *Improvements in Preventive Medicine and Environmental Hygiene*

Public Health by definition includes disease prevention. The control of communicable diseases, the creation of a healthy sanitary environment (improved housing conditions, raising of nutrition standards and provision of adequate and clean water supplies), the education of the population at large in matters pertaining to personal hygiene, the organization of the medical services for the diagnosis of diseases, in themselves all targets within the ambit of preventive medicine, were given very high priority during the 1962–1966 period. The marked improvement in the standard of living attained during this period has resulted in a substantial betterment of the standards of nutrition and food hygiene which on the whole now resemble European patterns. With regard to water supplies, all main towns and practically all villages were provided by the end of 1966 with piped water. The quality of the water used for drinking purposes also is satisfactory and this has been a very important contributory factor in the decline of enteric infections. Improvements in the detection of communicable diseases and in the environmental sanitation have brought about a decrease in the hazards which endanger the health of the community. A vigilant eye has also been kept at all sea and airports in order to safeguard Cyprus against quarantinable epidemic diseases communicated through the medium of passengers coming from or passing through infected foreign countries. Particular emphasis was given to the control of tuberculosis, leprosy, and echinococcosis. The incidence of the former two diseases is by international standards very low in Cyprus. Echinococcosis is really the only endemic disease in Cyprus and many efforts were made for its control and eradication through the launching of a comprehensive scheme providing for the destruction of stray dogs, the periodic inoculation of domestic dogs, the construction of slaughter houses, the organization of a meat inspection service and the health education of the public. One important yardstick for measuring the level of the development of preventive medical and public health services in general is the prevailing death and infant mortality rates. The record of Cyprus in this respect is impressive. In 1966 the crude death rate was 5.8 per 1000 persons, the infant mortality rate 26.7 per 1000 persons whilst the maternal mortality rate was only 0.2 per thousand total births.

(*d*) *Industrial Hygiene*

During the First Plan period efforts were also made to improve the health of the workers. A number of large industrial undertakings and the Mining Companies maintain their own hospital and welfare clinics. Some trade unions have also established out-patient clinics for their members and their dependents. In the result, serious industrial diseases in Cyprus have been eradicated with the exception of pneumoconiosis about which special legislation was enacted.

2.3 Private Health Services

Substantial progress was also recorded in the private sector which caters for the bulk of medical problems in Cyprus. The increase in the number of doctors and dentists in the private sector has been as follows since 1961 :—

	1961	1966	Increase 1961–66 (Per cent)
Physicians (incl. Specialists) ..	308	350	13.6
Dentists	128	150	17.2

The private health sector has experienced a more rapid development than the public sector. Physicians, including specialists, in private practice increased by 42 between 1961 and 1966, while the corresponding increase in the public health service was only 9. Twenty two additional dentists were registered in private practice during 1962–1966, whilst only four additional dentists were engaged in the public service.

Finally, since 1963, private clinics and hospitals increased their bed capacity by 415, while the increase in beds in public hospitals was 259 beds for the whole period 1962–1966.

3. Present Situation

The progress which has taken place during the First Plan in both the Public and Private Health Services should not give the impression that there is no room for further improvement in this field. Indeed, both the private and public sectors are faced with a number of difficult and urgent problems which call for immediate solution.

3.1 Public Health Services

One of the main problems encountered by the public health services is the acute shortage of staff. Shortages exist in all types of staff—medical, nursing, and technical.

The present accommodation, equipment and facilities of public hospitals need improvement and expansion in order to be able to cope with the demand for out-patient and in-patient treatment. More attention should be given to maternity and child health services. The existing system whereby free or reduced medical treatment is accorded to the needy classes of the population, depending essentially on the judgment of a village or town headman (mukhtar), is by no means satisfactory and needs re-appraisal.

The structure of the Public Health Services in general appears to be in need of radical reorganization in order to be rendered more efficient and effective.

In the field of preventive medicine efforts must be intensified so as to combat effectively the hydatid disease which affects a large number of animals and human beings every year. The imperfect system of public sewers and sewerage disposal is another field where priority action is called for. A proper School Health Service must be established for the promotion of the health of the child. Vital and health statistics need considerable improvement. The standard of environmental sanitation must be raised further.

3.2 Private Health Services

The Private Health Services, though providing on the whole medical care of a high standard, are confronted nonetheless with a number of problems.

Shortage of staff at all levels is one of the serious problems confronting the Private Health Services. The most serious shortages are to be found among the nursing staff. To overcome these shortages private clinics have to supplement their nursing staff with nurses who have no professional qualification or training. Deficiencies in specialized and modern equipment also exist.

The distribution of private doctors and hospitals, concentrated as they are almost wholly in the towns, inconveniences to some extent the rural population, which cannot have readily available the required medical services and treatment.

The majority of private hospitals specialise in maternity and surgical care and very often refer other cases to public hospitals for treatment. One consequence of this narrow specialization is the existence of overcapacity for some types of treatment and few and inadequate facilities for other types of treatment.

The technical standards of the private health services are of an uneven quality. More importantly, they are not subject to any form of State supervision or control.

4. The Second Five-Year Plan—General Objectives

The long-term objectives of the development programme in the field of health are :—

(*a*) To establish an efficient and effective programme of preventive medicine and hygiene thereby minimizing the incidence of disease ; and

(*b*) to offer the best possible medical care and attention to all citizens.

Both objectives are designed to ensure the optimum physical, psychological and mental well-being of all members of the community. In this way citizens will be able to maximize their contribution to the economic and social development of society.

5. Specific Goals and Objectives of the Second Plan

It has been suggested that one of the means for attaining the above objectives is the introduction of some form of socialized medicine, a system of National Health Service. The possibility of introducing such a system has been examined, but it has not been found feasible at the moment or in the near future, because of acute shortages in medical, nursing, technical and other staff and equipment, which are indispensable prerequisites for the implementation of such a scheme. But this does not mean that the objectives set out above will not be pursued and that simultaneously efforts will not be directed towards preparing the ground for the introduction of a suitable scheme at a later and more opportune time. The main objectives during the Second Plan period will thus be :

(*a*) To take the necessary financial and administrative measures so as to secure the right quality and number of medical and para-medical staff which is necessary for the proper functioning of the Medical Services and the rendering of adequate and suitable service to the public ;

(*b*) to develop a sound preventive medical and public health service ;

(*c*) to improve and expand hospital accommodation and equip public hospitals with modern equipment and facilities ;

(*d*) to encourage and regulate private medical services ; and

(*e*) to improve the vital and health statistical data and records.

5.1 Overcoming Staff Shortages

(*a*) *Medical Staff*

Various measures are contemplated in order to solve the problem of staff shortages and ensure their qualitative and quantitative improvement. The existing salary structures will be revised and more attractive terms and conditions of service will be offered. It is hoped that this measure will not only make it possible for new medical officers to be recruited, but will also encourage experienced and specialized serving medical officers to remain in the Service. A long-term scholarship and training programme will also be introduced for both undergraduate and post-graduate studies in medicine as a means of increasing the number of doctors and specialists in the Public Health Services. In addition the desirability will be examined of engaging private specialists on a part-time basis to assist Government medical specialists. It is also contemplated to arrange short-term visits by foreign experts of distinction in specific medical specialities not available in the Island.

(*b*) *Paramedical Staff*

The problem of shortages of nursing staff will be tackled through the simultaneous pursuit of policies along the following lines : (*a*) by enlightening and educating the public on the importance of the role of the nursing profession in society. It is only through continuous and persistent education of the public that existing prejudices against the profession will be overcome ; (*b*) by offering better remuneration and conditions of service ; (*c*) by offering attractive allowances to trainee nurses at the Government Nursing School ; and (*d*) by enhancing the prospects of employment of graduates of the School through the creation of more organic posts in the public service and the encouragement of private doctors to engage as many graduates of the School as possible.

With regard to other categories of paramedical staff, (laboratory technicians, etc.) measures will be taken to secure the additional technically trained staff that will be required for the Government Laboratories (and the private sector).

5.2 Improvement of Preventive Medical Services

The importance of preventive medicine in maintaining and raising health standards cannot be over-emphasised. Government will, therefore, exert determined efforts to enhance the standard and quality of preventive medicine and eliminate as far as possible existing public health hazards.

Hydatid disease (echinococcosis) is still the most prevalent and serious endemic disease in Cyprus. The measures outlined in paragraph 2.2 above for combating this disease will be stepped up so that the amount of human suffering and the waste of productive power due to absenteeism from work caused by this disease are minimized. Although tuberculosis is not a serious problem in Cyprus, Government's final goal during the Plan period is to banish this disease altogether from the Island. The same applies to leprosy. This latter disease constitutes only a minor health problem. Nonetheless the Plan target is to eradicate it completely and to achieve this objective it is proposed to establish, within the Dermatological Department of the Nicosia General Hospital, a Leprosy Control Service, designed to trace and detect unknown leprosy cases. The immunization services of the Ministry of Health will be strengthened so as to enable the immunization of all young age-groups against infectious diseases. Legal and other measures will also be taken to deal with air pollution though again this is not for the time being a health problem.

The school health service and health education are part and parcel of preventive medicine. It is envisaged to establish during the last years of the Plan a co-ordinated scheme of health education and school health service (including dental service). The purpose of this scheme will be: (*a*) to safeguard and improve the physical and mental development of children in elementary and secondary schools; and (*b*) to instruct and furnish advice to the general public and to children of school age on matters pertaining to public health and especially on the causation and prevention of disease.

The launching of a proper health education programme will, it is hoped, go a long way towards bringing home to all sections of the population, especially in rural areas, the importance of improving environmental sanitation and personal hygiene standards.

One of the objectives of the health programme is to maximize the child's chances of survival at birth, to increase its life expectancy and to ensure that it enjoys good health throughout its lifetime. These aims are inter-related and require not only the promotion of curative health services but also the development of preventive services. As it is usual, however, to classify Maternal and Child Health as part of the Preventive Medicine, it should be stated here that during the second Five-Year Plan heavy emphasis will be placed on the extension of the maternal and child health services, chiefly in the rural areas. As stated earlier, maternal and infant mortality rates in Cyprus are low, and with the extension of these services it is hoped to reduce the existing rates still further. Efforts will be made to train suitable personnel, mainly community health visitors who are considered to be the backbone of the Maternal and Child Service. The services of these health visitors will be made available to mothers and children living in the countryside and away from the main Urban Centres. Moreover, a new Children's and Maternity Hospital will be erected which will constitute the first phase of a new General Hospital (more details about this project are given in paragraph 5.3 below). The Ministry of Health will also liaise closely with the Welfare Services and local institutions and voluntary organizations in matters concerning the welfare of the pre-school child.

During the Plan period the Ministry of Health will intensify its efforts to maintain adequate food and drug control, including control of dangerous drugs. It will also provide up-to-date laboratory facilities to test food standards and drug quality and potency. Efforts will continue to be exerted towards the promotion of the health of the workers in all occupations and their protection from risks resulting from adverse factory conditions. Particular attention will also be paid to the Port Health Services to ensure that no quarantinable disease is imported from abroad and that no mosquitoes or other vectors of disease are allowed to gain access to the country.

The establishment of a proper sewerage system and the provision of adequate fresh drinking water supplies are also activities falling within the spectrum of preventive health services. It is envisaged that during the Plan period work will commence on the construction of sewerage systems in the towns of Nicosia and Famagusta, where the problem is more acute. With regard to drinking water supplies, considerable progress has already been made and the situation will be further improved during the Second Plan period (see Chapter on Water Resources).

5.3 Improvement and Expansion of Hospital Accommodation and Provision of Modern Equipment and Facilities

The Second Five-Year Plan will give particular attention to the improvement and expansion of hospital accommodation and the provision of modern equipment. To improve and expand hospital capacity, it is envisaged to implement a series of projects the most important of which are :—

(a) New General Hospital

Government proposes to build a new General Hospital at a suitable locality in Nicosia. The services of a Hospital

Architect have been made available to the Ministry of Health, who after studying the proposed site, the volume of the building etc., will draw up a draft master plan for this Hospital. This will be a major project and will consist of a number of phases, each phase constituting a self-contained operational unit. The first phase will provide Gynaecological, Obstetrical and Children's services. The Children's section will be of a capacity of 150 beds, while the capacity of the Maternity and Gynaecological section will be of 120 beds. Expenditure anticipated for the first phase of the project is of the order of £700,000, excluding expenditure for specialists and other medical and paramedical staff.

(*b*) *Remodelling of the Nicosia General Hospital*

The increased volume of work in the Nicosia General Hospital necessitates structural alterations and remodelling in order to enable it to function and operate more efficiently. Expenditure anticipated for the carrying out of such alterations (including sewage disposal improvement) is of the order of £65,000.

(*c*) *Extension of the Out-patients Clinic, Nicosia General Hospital and Construction of a New Out-patients Clinic in Nicosia*

The number of patients at present attending the Out-patients Clinic of the Nicosia General Hospital is very high in relation to existing accommodation and available medical personnel. This is due to the fact that while the Out-patients Clinics of the District Hospitals receive patients from their respective rural areas only, the Nicosia Out-patients Clinic receives patients not only from Nicosia District but also from all over the Island. This causes congestion and overcrowding and at the same time, and more importantly, deteriorates the standard of service offered to patients. To remedy this situation it is proposed :—

(i) To remove the Medical Stores which are at present accommodated in the Nicosia General Hospital compound, and to utilize the space thus created for the extension of the Nicosia General Hospital Out-patients Department.

(ii) To ensure that patients from districts other than Nicosia attend in the first instance the Out-patients Department of their respective districts or rural hospitals ; and

(iii) To construct a new Out-patients Clinic in Nicosia to cater mainly for patients coming from the Nicosia suburbs.

Development expenditure for the implementation of these projects will be of the order of £150,000 as follows :—

(1) Extension of Out-patients Clinic, Nicosia General Hospital, about £46,000.

(2) Construction of new Out-patients Clinic in Nicosia, about £30,000.

(3) Construction of new Medical Stores, about £70,000.

(*d*) *Psychiatric Hospitals*

It has been observed that as a result of the tension of present-day life the incidence of mental illness and emotional disturbances has increased. Because of this change in the pattern of disease, the Government has given increased emphasis on the development of the Psychiatric Services. Priority in the development of these services will continue to be accorded during the Second Plan period. Thus, the new Psychiatric Hospital, erected during the First Five-Year Plan, will be extended by the construction of an Assembly Hall to accommodate 350 persons, which will provide opportunities for a communal life conducive to the patients' welfare and readjustment. Similarly, two Admission Wards, one for males and one for females, will be constructed next to the New Psychiatric Hospital. To the same Hospital will also be added a Rehabilitation Ward (male) to enable new patients to be rehabilitated for such periods as is necessary for their treatment.

A Psychiatric Wing will be constructed at the Famagusta Hospital and a similar one at the Limassol Hospital.

Development expenditure for the above projects is anticipated to be of the order of £90,000.

(*e*) *Improvements to District Hospitals*

The possibility of erecting a new Hospital in Kyrenia or of making radical improvements to the existing one will be examined and the necessary provision has been made for this purpose. Other District Hospitals will be improved in order to be rendered more self-sufficient. Thus, Physiotherapy Centres are to be added to Limassol and Famagusta Hospitals. Alterations will be effected to the Out-patients Clinic of the Limassol Hospital, where a new medical store will also be constructed. Additions and alterations will be effected to the Children's Male Ward at Paphos Hospital, where a new Female Ward will also be added. Central heating systems will be installed in all District Hospitals. The above are only selected important projects planned for implementation during the Plan period aiming at strengthening District Hospitals and enhancing the standard of medical service offered to the people. It is anticipated that development expenditure for the execution of these projects will be of the order of £200,000.

(*f*) *Auxiliary Building Construction*

A new modern Analytical Laboratory will be erected in Nicosia to cope with the increasing demand for chemical analysis, food and drug quality control, etc., following the enactment of the Drugs (Control Quality, Supply and Prices) Law. The Laboratory will continue to carry out forensic chemical analyses of exhibits presented by the police for the detection of crime. Development expenditure for the implementation of this project will be of the order of £90,000.

A new Vocational Rehabilitation Centre will also be established in Nicosia to cater for the training of disabled persons in suitable vocations thereby rendering them capable of earning their living and becoming useful members of the society.

(g) *Provision of modern equipment and appliances*

One of the objectives of the Plan in the medical field is to provide all hospitals with modern hospital and medical equipment, laboratory and analytical equipment, and dental equipment and appliances to enable all existing hospitals and laboratories to function as smoothly and efficiently as possible. Total development expenditure earmarked for the provision of this equipment is of the order of £80,000.

5.4 Reorganization of Record-Keeping and Health Statistics

An efficient statistics and record-keeping system will be established not only for pusposes of planning but also for evaluating the effectiveness of various health activities. Information on vital and health statistics, which are not complete at present, will be collected and the whole system of collecting and compiling health statistical data will be improved and better organized. In this effort the cooperation of private doctors and their associations would be indispensable as a large proportion of the population makes use of private doctors who do not at present provide any vital or health statistical data to the Government.

6. Rural Health Centres

Doubts have been expressed regarding the advisability of retaining these Centres as institutions for curative medicine. The main arguments put forward relate to the prevailing acute staff shortages and the fact that these Centres are not equipped with X-Ray Laboratory and blood transfusion facilities, indispensable for proper curative treatment. The policy concerning rural health centres will be carefully reviewed and a decision will be taken whether to maintain, increase and strengthen these centres or to replace them by a smaller number of rural hospitals in major rural areas, equipped with all facilities so that they may be able to render proper and adequate curative services.

7. Development Expenditure

Development expenditure allocations for the Health Services during the Second Plan are as follows :—

Development Expenditure for the Public Health-Services, 1967–1971

TABLE 3

	£ 000
Construction of a New General Hospital (First Phase- Children, Gynaecological and Obstetric Hospital)	700
Improvements to Nicosia General Hospital	65
Improvement to and Expansion of Psychiatric Hospitals	90
Improvements to and Expansion of District Hospitals	200
Improvements to and Expansion of Out-Patients Clinics	75
Improvement of Preventive Medical Services	70
Purchase of Equipment (Hospital, Medical, Laboratory and Dental)	80
Auxiliary Building Construction (including Medical Stores and Analytical Laboratory)	160
Other	60
Total	1,500(¹)

8. Private Health Services

It is expected that the Private Health Services will continue to expand and improve. Although it is difficult to foresee the direction in which improvements will take place, it is certain that the past trend of expansion will continue during the next five years and perhaps at a faster pace. The possibility of Government encouraging the establishment of Polyclinics by the private sector will be explored. The objective of such policy would be to ensure that a Polyclinic offers medical treatment in desirable fields of specialization. This will result in a better utilization of private hospital bed-capacity throughout the year and the realization of economies in material and human resources. Consideration will also be given to the introduction of measures designed to ensure minimum standards.

(¹) These expenditures do not include the recurrent funds provided in the Ordinary Budget for salaries, drugs and hospital supplies, equipment, etc. In 1966, the provision for such services in the Ordinary Budget was £1.1 million.

CHAPTER 15

EDUCATIONAL (INCLUDING CULTURAL) DEVELOPMENT

1. Introduction

One of the primary objectives of education is human resource development, a process whereby accumulated knowledge, skill and experience is transmitted to younger generations. The development of human resources enables people to enhance their capacities, to become constructive elements in society and to lead richer and fuller lives. But if this objective is to be attained, it is necessary for accumulated knowledge and experience to be sorted out and for antiquated methods and techniques to be abandoned.

This is not to suggest that a strict utilitarian and vocational attitude to education is advocated. On the contrary, education must cultivate all moral, cultural and intellectual ingredients in a man's personality. The question is always one of striking the right balance, a balance between humanistic and technical education.

2. Past Developments, 1946–1960

Education is a long-term process. Returns on investment do not accrue immediately after the actual spending ; but once the educational cycle is completed, returns begin to come in continuously thereafter. The educational system, therefore, must be studied in a wider perspective and beyond the time span of a five-year development plan, past and future. For this reason, various aspects of education in Cyprus are examined here with reference to the whole post-Second World War period up to the year of Independence.

The period after the Second World War was a period of rising expectations. Significant changes in attitudes occurred and high hopes were pinned on education. This, together with the gradual emancipation of women, brought considerable changes in the educational standard of the Island, the most notable of which was the rise in the level of literacy (Table 1).

Percentage Distribution of Literacy of Persons 7 Years of Age and Over, by Sex, 1946 and 1960

TABLE 1

	1946			1960		
	Total	Males	Females	Total	Males	Females
Read and Write ..	64.3	78.6	50.5	80.8	90.6	71.5
Read only	2.6	2.2	2.9	1.0	0.6	1.4
Illiterate	33.1	19.2	46.6	18.1	8.8	26.9
Not Stated	—	—	—	0.1	—	0.2
Total ..	100.0	100.0	100.0	100.0	100.0	100.0

Source : Statistics and Research Department, Statistical Abstract, 1966.

Elementary Education attendance had already risen high enough in the early post-war years. About 85 per cent of the total population between the ages of 6–12 attended elementary schools in 1948 ; in 1962 attendance had risen to about 90 per cent of the total eligible children. At the same time the number of pupils dropping out had fallen considerably. Both these developments could be regarded as remarkable given that, though elementary education was free, it was not compulsory.

However, the most far-reaching advance in education in the period under examination occurred in the field of secondary education. According to the 1946 Census of Population, about 17 per cent of the population in the age group 13–18 were attending secondary schools in that year. By 1960 the proportion had risen to over 40 per cent. Thus, whereas in the school year 1946/1947 only 40 per cent of all elementary school graduates in 1945/1946 proceeded to secondary education, in the school year 1960/61 over 73 per cent of the 1959/1960 elementary school leavers did so. Both are clear manifestations of a rising demand and the existence of more facilities for post-elementary education.

Statistics of secondary school graduates who followed university studies abroad are lacking. From Table 2, which indicates the educational attainment for persons 20 years of age and over, one can see considerable structural changes in the distribution of literate people as well as a substantial increase of the proportion of university graduates.

Percentage Distribution of Educational Attainment for Persons 20 Years of Age and Over, by Sex, 1946 and 1960

TABLE 2

	1946			1960		
	Total	Males	Females	Total	Males	Females
Never Attended School	40.8	22.8	57.8	24.7	11.9	36.5
Elementary School ..	49.9	64.4	36.2	56.6	63.2	50.5
Secondary and Technical	7.6	10.5	4.9	15.4	20.5	10.7
University	0.7	1.0	0.4	1.3	2.1	0.6
Other Educational Institution	1.0	1.3	0.7	1.6	2.1	1.1
Not Stated	—	—	—	0.4	0.2	0.6
Total ..	100.0	100.0	100.0	100.0	100.0	100.0

Source : Statistics and Research Department, Statistical Abstract, 1966.

If conclusions may be drawn from the study of certain " educational indicators ", progress in the educational field was not only quantitative but also qualitative.

In 1960, the number of elementary schools was 770 as compared to 686 in 1946. Elementary school teachers also increased from 1,375 to 2,392 ; the pupils/teacher ratio went down from 43.2 in 1946 to 35.0 in 1960. The cost of primary education also increased substantially the burden falling mainly on the Government, which financed all recurrent expenditure, and partly on the communities which shouldered most of the capital outlays and the cost of maintenance of school buildings as well as the provision, free of charge, of books, stationery and meals for poor children. In 1948, the total cost (*i.e.* recurrent and capital) of elementary education was £633,000 ; in 1962, it had gone up to about £2 million. In other words, while in 1948 only £10.7 was on an average spent on each elementary school child, to provide elementary education in 1962 it cost £23.7 per pupil.

Rising demand necessitated expansion and improvement in accommodation and teaching facilities for secondary education schools as well. In 1946 there were 37 secondary schools, whereas in 1960 their number went up to 65, seven of which were Technical, Vocational or Agricultural Schools. The number of teachers also increased. While in 1946 402 teachers were engaged in secondary education, in 1960 the number of teachers in schools under the Greek and Turkish Communal Chambers alone were 1,225. The ratio of pupils per teacher, which was 22.1 in 1946, was somewhat higher in 1960 and this in spite of the tremendous increase of teaching staff. The reason was the almost four-fold increase in the number of pupils in secondary schools.

3. The Period 1960-1966

Prior to Independence, the Education Department of the Colonial Government had general responsibility for education in the Island. It directly administered Elementary Education, including training of Primary School Teachers, and partially controlled Secondary Education. Several communal committees and individuals provided independent Secondary Education. After 1960, however, education came under the control of the two newly established Communal Chambers, the Greek and the Turkish Communal Chamber. Schools belonging to other religious communities, as well as inter-communal schools, were placed under the supervision of the Ministry of Interior, with the exception of the Reform School and the Prison School which were placed under the jurisdiction of the Ministry of Justice.

The Greek Communal Chamber was abolished on the 31st March, 1965, and since then the Ministry of Education is responsible for Elementary, Secondary and Higher Greek Education. The Turkish Communal Chamber is responsible for Turkish Education in the Island.

The re-organization of education on a communal basis after 1960 and the situation which prevailed after the political anomaly in December, 1963, render the comprehensive examination of educational developments in this period difficult. A detailed examination of the progress made in Greek education, for which more information is available, will be made in the following paragraphs. The Turkish education is only generally touched upon in a subsequent section.

4. Greek Education (Public)

4.1 Kindergartens

Immediately upon its establishment the Office of Greek Education took measures to coordinate and place on a uniform basis the functioning of kindergartens run by individuals and charitable organizations. A number of regulations were passed pertaining to qualifications of personnel, conditions of accommodation, and the equipment of such schools. Particular emphasis was laid on raising the standard of kindergartens teacher. For this purpose a number of teachers were trained abroad and a course was organised at the Cyprus Paedagogical Academy in 1961/62 for training future child minders. To lay down standards for the guidance of and adoption by private kindergartens one of the existing kindergartens was placed directly under the auspices of the then Office of Greek Education.

Ever since the institution of kindergartens has developed gradually. A number of such public schools were established and the pace was set for the establishment of many private ones. By 1965/66 there were 9 kindergartens with 468 children under the direct control of the Ministry of Education.

4.2 Elementary Education (1)

In 1962 Greek Primary Education became compulsory. Although school attendance in primary schools was practically universal even before the enactment of the compulsory education law, the effect of the law was to enable school children to complete their elementary schooling.

Total Greek primary school population increased from 67,276 in 1960/1961 to 71,502 in 1965/66 or by 6.3 per cent. In order to accommodate this increased number of pupils a number of new schools were constructed, though the main construction work has been in the direction of replacing old school buildings with modern ones and in providing better amenities to both pupils and staff. Thus, during the 1961/62–1965/66 period, which approximately corresponds to the First Five Year Plan, 110 new school buildings were erected and a series of extensions and improvements were made to existing buildings at a cost of £787,621. During the school year 1960/1961 a sum of £136,835 was spent for the same purpose. The number of elementary school teachers went up from 1,875 in 1960/1961 to 2,022 in 1965/66. Hence the pupils/teacher ratio was reduced from 35.9 to 35.4. Another indicator of qualitative improvement in elementary education is the number of pupils per classroom. In 1960/1961 this ratio was 37.1, whereas in 1965/1966 it went down to 31.7.

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(1) The following analysis covers also the Maronite primary schools, which are administered by the Greek Educational Authorities.

4.3 Eight-Year Primary Schools.

A number of major rural areas were selected for the establishment on an experimental basis of eight-year primary schools, designed to provide another two years of free education mainly for pupils who did not propose to follow secondary education. Nine such schools were operating in 1959/1960, the first year of the introduction of this type of school, with 200 pupils. In 1960/1961 their number increased to 12 and the number of pupils to 341. In 1965/1966 there were 11 such schools with a total number of 490 pupils and 28 teachers. These schools were designed to fill an existing gap between the ages of 12 and 14, i.e. the age when primary education finishes and the lawful age at which young persons can start working or learning a job. At the same time, they were intended to provide further free education to children in rural areas. The curricula of these schools underwent considerable change, indeed so much so that the schools have become pre-vocational schools.

4.4 Secondary Education

In 1960/61 certain changes were effected to the administration of schools providing secondary education. Appointment, remuneration and supervision of school teachers became the responsibility of the Office of Greek Education. Those school committees, which previously had been running the schools as communal schools, appointing and paying the teaching staff, were as from that year made responsible only for the provision of school buildings and equipment and for their maintenance. To enable them to carry out this responsibility they were given power to collect the so-called internal fees from students. The fees alone were inadequate for the above purpose and so the school committees had to be subsidised by the Government. For the provision of new buildings they, as a rule, resorted to loans.

The number of public secondary schools and the number of secondary school teachers and children is shown in Table 3.

Number of Public Secondary Schools, Pupils and Teachers, 1959/1960 and 1965/1966

TABLE 3

	1959/1960				1965/1966			
	No.	Pupils	Teachers	Pupils/Teachers	No.	Pupils	Teachers	Pupils/Teachers
Greek Communal Sec. Schools ..	21	14,906	492	30.3	34	22,113	932	23.7
Greek Technical, Vocational, Commercial, Agric. Schools	3	710	54	13.1	11	3,282	220	14.9
Total ..	24	15,616	546	28.6	45	25,395	1,152	22.0

Sources : Statistics and Research Department,
Surveys on Educational Statistics, and
Office of Greek Education, Annual Report.

It will be seen from Table 3 that a considerable reduction in the pupil/teacher ratio was effected during this period. A number of other improvements might also be mentioned. Altogether 215 new classrooms were constructed during the period 1960–1966, 42 of which were for technical education, and a number of other improvements and extensions were made to secondary school buildings. The total cost of these projects amounted to £620,044. Out of this total, £397,370 were spent during the First Five-Year Plan as follows :—

	£
General Secondary Education	202,035
Technical Education	195,335
Total	397,370

Particular emphasis was given during this period to Technical, Vocational and Agricultural Education. The total number of these schools was increased from 3 in 1959/1960 to 11 in 1965/66. In the former year, there were 710 students and 54 teachers. The figures for 1965/66 were 3,282 and 220 respectively as follows :—

	No. of Schools	No. of Students	No. of Teachers
Technical Vocational Schools ..	6	2,424	152
Commercial Vocational Schools ..	3	623	46
Agricultural Schools	2	235	22
Total	11	3,282	220

But in spite of this expansion there is still much to be done in the way of promoting technical education, if this is to adequately serve the needs of accelerated economic development. More about this will be said later.

4.5 Post-Secondary Education

Post-secondary education is provided by the Paedagogical Academy, the Forestry College and the School of Nursing. The latter two are described in the relevant chapters. The former provides training for future elementary school-teachers. The number of intakes is determined according to the estimated needs of elementary education from time to time. In 1959/60 the Paedagogical Academy had 320 students and 24 teachers. In 1965/66 the number of students was 119 and that of teachers 19. A third year of studies was also added.

4.6 Cost of Public Greek Education

During the First Five-Year Plan total expenditure (capital and recurrent) on educational and cultural activities amounted to about £17 million. Thus, on an average, about £3,400,000 were allocated for these services every year.

4.7 Institutes of Foreign Languages and Other Schools and Programmes

From the early days of Independence, the Office of Greek Education established a number of Institutes for foreign languages, which have continued to the present day. In 1961/62 the total number of persons attending these Institutes was 2,632 comprising persons in a variety of occupations and professions as well as a large number of pupils. In 1965/66 the number increased to 3,455.

There is at present a number of Government controlled Special Schools—the Blind School, the Deaf School, the Reform School and three Schools for Retarded Children. The Reform School is dealt with in Chapter 18. The Blind School accepts blind children as well as children with defective eye-sight between the ages of 5 and 19. In 1965 the activities of the School were extended to cover vocational training in addition to elementary and secondary education provided until then. A new building providing modern amenities and a boarding house was erected at Government expense at a cost of about £72,000. A total of 72 pupils attended the Deaf School in 1965/66. The conditions for new entrants are that pupils should be in the age-group 6–9 except in special cases. Pupils stay at the school up to the 18th year of age.

Towards the end of the First Plan period, the Cyprus Broadcasting Corporation, in cooperation with the Educational Authorities, inaugurated School T.V. programmes.

5. Private and Other Education

Soon after Independence the Greek Communal Chamber offered to buy the existing private schools of secondary education. In fact all but a very few owners of private schools did agree to transfer their schools and equipment to the Communal Chamber at an agreed price totalling about £206,000. The resulting additional recurrent expenditure amounted approximately to another £200,000.

Since then the number of private secondary schools has been increasing. Many of these offer similar tuition as that offered by Gymnasia, but a few specialise in particular fields of study such as commerce, university entrance examinations and technical subjects. The number of private secondary schools in 1959/60 was 13 with 5,685 students and 197 teachers. In 1965/66 there were 10 such schools with 3,199 students and 131 teachers. The student/teacher ratio was 28.9 in the school year 1959/60 and 24.4 in 1965/66.

In addition to the Greek private schools, there are a number of schools serving the Armenian and Maronite communities. For the Maronites there are at present four elementary schools coming under the Greek Elementary Education, Maronite Education being administered by the Ministry of Education. Secondary Education for this minority is provided by Greek Secondary Schools.

The four Elementary Armenian Schools, although supervised by the Greek Educational Authorities, function under their own independent administration. At present the total number of pupils is 270 and the number of teachers 24. The Armenian Secondary Education is examined under the Inter-communal Educational Institutions (see below).

6. The Turkish Educational System

Because of the inadequacy of statistical data the examination of Turkish education will be confined to the period 1959/1960–1964/65 only. This lack of data impedes the projection of basic educational indicators necessary to establish needs and requirements. The study, however, of the above period, as well as of some past long-term indicators, could throw some light on possible problems which could be tackled eventually when normal conditions prevail.

6.1 Elementary Education

Enrolment in Turkish elementary schools was 15,339 in 1959/1960, about 3,926 more than in 1946/1947. By 1964/1965 the number increased to 16,700. The number of elementary school-teachers increased from 331 in 1946/47 to 487 in 1959/60 and to about 530 in 1964/65. The faster increase in the number of teachers had the favourable effect of reducing the pupil/teacher ratio from 34.5 in 1946/47 to 31.5 in 1959/60, while the same ratio for 1964/65 was again 31.5.

The number of schools also increased—from 208 in 1946/47 to 217 in 1959/60 and 227 in 1964/65. The quick pace of school building construction resulted in 1962/1963 in a ratio of 33 pupils per classroom. Although this is an overall satisfactory situation differences exist between urban and rural schools. In 1962/1963 the number of pupils per classroom in the towns was 40.3, as against 29.6 in villages.

Attendance to elementary schools of children in the age of 6 to 7 was very high after the Second World War. Wastage in the early post-war years, however, was also high. It is estimated that in 1951/52 only 58.1 per cent of pupils enrolled in 1946/47 did in fact graduate. In 1962/63 this proportion went up to 77.3 per cent.

6.2 Secondary and Post-Secondary Education

Turkish Secondary Education is organised in two layers of three-years duration each ; a lower layer comprising the Junior High School ; and an upper layer comprising the Senior High Schools (Lycees) and Technical, Vocational and Agricultural Schools. All pupils who finish the elementary school and wish to proceed to a secondary school have to go through the Junior High School. Specialization takes place in the upper layer.

In 1959/60 and 1962/63 about 74 per cent of graduates from elementary schools found their way to Junior High Schools. In absolute numbers about 4,010 pupils registered in 1959/60, while in 1962/63 the number went up to 4,232. A considerable wastage of pupils in Junior High Schools was observed in 1963. Graduates in this year were only 45.8 per cent of the total number enrolled three years ago.

The bulk of the graduates of Junior High Schools followed general education, though in relative terms this percentage was in fact declining. As may be seen from the following percentages of Junior High School graduates going to Senior Schools, the proportions of students attending Commercial and Technical Schools were increasing.

	1959/60	1962/63
Lycees	67.4	52.8
Commercial	7.8	24.4
Technical	9.2	18.7
Total	84.4	95.9
Drop-outs	15.6	4.1

The number of teachers in secondary and post-secondary education (Teachers' Training College) increased from 247 in 1959/1960 to 341 in 1962/63. The pupil/teacher ratio was 21.0 in 1962/63. Finally, the pupil/classroom ratio for Junior High Schools, the only schools for which statistics are available, was 39.6 in 1962/63.

7. Inter-communal Schools

To complete the picture, a few words should also be said about inter-communal schools, which in 1960 did not come under the jurisdiction of the Communal Chambers.

Most of these are secondary schools in some cases with primary schools attached to the parent school. The tuition offered is usually in a foreign language and they are open to all ethnic groups. In 1961/62 they had 3,195 pupils in secondary education with 175 teachers and a pupil/teacher ratio of 18.2. In 1965/66 the number of secondary education children increased to 3,790 and the number of teachers to 219. The pupil/teacher ratio was 17. In 1965/66, 3,225 out of the total number of pupils were Greeks. In 1965/66 elementary education was offered to 609 pupils by 28 teachers with a pupil/teacher ratio of 22. Finally, in 1965/66 258 children were attending kindergartens organized by these schools.

8. Present Situation and Problems

Because of the lack of adequate data on Turkish education (on account of the political situation), the examination of the present situation and problems as well as the objectives and policy outlined in subsequent paragraphs cover Greek education only. However, as the analysis set out earlier indicates, *mutadis mutandis* the problems are common to the whole educational system in Cyprus irrespective of religious group. And the conclusions reached and the solutions proposed are, therefore, of more general application.

(*a*) Elementary education has become compulsory and practically a hundred per cent of children in the age group 6–12 receive this kind of education. This may well be the reason why the percentage of elementary school graduates who go to secondary schools has dropped from 71.4 per cent in 1960/61 to 66.4 per cent in 1965/66 (1).

(*b*) About 50 per cent of pupils registered in secondary schools for the first time fail to graduate. Thus, out of a hundred elementary school-leavers about 70 go to a high school and about 35 of them do in fact go through all six classes, *i.e.* approximately 1 out of 3 young persons receives complete secondary education.

(*c*) The secondary educational system is not geared towards meeting the manpower needs of the economy. Considerable progress has been made, however, in the right direction, as is shown by the following comparison (Table 4) of the percentage number of pupils attending various specializations in the three final years between 1961/1962 and 1965/1966 :—

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(1) These percentages, calculated on the basis of registrations in the first class of secondary schools as compared to the number of pupils in the sixth class of elementary schools in the previous year, are only indicative. Allowance should be made for pupils re-registering in the first class of secondary schools, for pupils registering with inter-communal schools, and for pupils continuing in the eight-class elementary schools. In fact, when pupils registering with inter-communal schools are taken into account the percentage for 1965/66 rises to 75.3. No comparable figures are available for 1960/61.

Percentage Distribution of Pupils in the Upper Three Classes of Public Greek Secondary Schools by Specialization, 1961/62 and 1965/1966

TABLE 4

	Classical	Commercial	Science	Technical, etc.	Total
1961/62	60.6	31.2	6.2	2.0	100.0
1965/66	55.6	25.0	11.6	7.8	100.0

The percentage of pupils following Technical, Vocational and Agricultural education is expected to double in the early years of the Second Plan because of the higher intake of students in these schools.

9. Objectives and Policy under the Second Five-Year Plan

As already pointed out, in educational planning a period of five years is not enough. There is a need for long-term planning in this field. Unfortunately, so far no such effort has been made and it is one of the objectives of the Second Plan to provide for the establishment of the necessary machinery for long-term educational planning.

In the drawing up of the educational programme for the Second Plan a choice had to be made between quantitative expansion and qualitative improvement in Education. In the ultimate analysis, the question was really whether it was desirable at this stage of development of the Island to extend the period of free and compulsory education say to the 14th or 15th year. This would have meant quantitative expansion, that a greater proportion of children would receive post-elementary or secondary education. There were, in fact many arguments both for and against such a measure, but on balance it was considered advisable, at least during the Second Plan period, to place the emphasis on qualitative improvements. As already indicated in this Chapter, considerable quantitative expansion has taken place during the post-Second World War period and what appears to be urgently needed at present is to raise the quality of education, to equip and train the skilled manpower required by the Island's fast growing economy. Moreover, apart from the additional economic burden which free education would have imposed on the Island's limited resources, it was considered that lack of adequate accommodation, personnel and equipment would have rendered the proper functioning of the educational system very difficult. A breathing space was, therefore, necessary in order to acquire the basic means for such an operation. Efforts will, however, continue to be made so that all children between the ages 6 and 12 do in fact attend elementary schools. Promising elementary school graduates, who, for financial reasons, cannot afford to proceed to secondary schools, will be assisted to do so and an appropriate selection machinery will be established. (It is estimated in this connexion that during the First Plan period about 35 per cent of secondary school children were so assisted).

If the efforts to raise the standard and quality of education bear fruit during the Second Plan period, the question of a quantitative expansion in the way of free education for the first two or three years of secondary education might be contemplated for the early stages of the Third Plan.

Analytically, the main Plan objectives, policies and projects are as follows :

9.1 Kindergartens

The standard of Kindergartens in Cyprus has in many respects been raised and there is no doubt that this improvement will continue. Although the importance of these institutions in facilitating mothers to undertake gainful employment, as well as their crucial role in the development of the personality of the child at the ages of 3 to 5, is recognized, it is not considered that there is at the moment an urgent need to extend the number of *public* kindergartens. The policy will, therefore, be to encourage further development of private kindergartens and to regulate them by Law.

9.2 Elementary Education

The programme for the expansion and modernization of school buildings will continue. The aim is to improve the standard of existing buildings and to provide for an adequate number of class-rooms to cater for the natural increase of school children. A sum of £1 million(¹) has been earmarked for this purpose, which is about 28 per cent more than what was spent during the First Plan period. The financing of this project will, as in the past, take the form of loans to school committees, the poorer of which will be subsidized by the Government.

This expansion will enable a reduction in the pupil/teacher ratio, so that it may be possible to attain the 40:1 ratio target in all cases.

A number of other measures will also be taken with the object of improving the quality of elementary education. Thus, a study will be undertaken with a view to devising the best way

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(¹) Including £80,000 for a new school for the Deaf and Dumb.

of linking education provided in elementary schools to that provided in secondary schools, so that the transition from the former to the latter may be more natural. Consideration will also be given to the desirability of introducing more technological and science subjects in the last two forms of elementary schools.

The improvement of the quality of the teaching staff will also receive attention. Possible solutions are to be found in the establishment of a permanent centre for further education of teachers at the Paedagogical Academy. The third year at the Paedagogical Academy might also be used for specializing future teachers in science and technology subjects. The award of more fellowships and scholaships abroad is another way of achieving this objective.

9.3 Secondary Education

(*a*) *General Education*

The present system whereby the first three-year cycle is devoted to general education will continue. But it is proposed to effect gradually certain changes to the curriculum of this cycle by the introduction of woodworking and metal-working subjects as part of general education and as a means of enabling students to develop their aptitudes and skills. Furthermore, the general school curricula will be kept under review.

The present streams of specialization (classical, commercial, science, technical, agricultural) will be maintained and new streams will be introduced as the need arises. But more emphasis will be placed on the science and technical specializations. Regular manpower surveys and vocational guidance will enable a better integration of education with economic planning and will give such a re-orientation to the educational system as to make it better able to serve the needs of the economy. At the same time, the quality of education will improve. More emphasis will be given in the curricula to the practical application of theoretical knowledge especially in the field of science. New school buildings will be erected and extensions to existing buildings will be undertaken (an amount of £300,000 has been earmarked for this purpose) to meet more adequately the needs in accommodation. It will, thus, be possible to reduce the pupil/classroom ratio and enable better supervision by the staff.

An effort will also be made to raise the standard of the teaching staff through the award of scholarhips in a variety of priority fields.

(*b*) *Technical—Vocational Education*

The major breakthrough in the educational system will be in the field of Technical-Vocational education. For a variety of reasons, the development of technical education has not gone far enough, in spite of the fact that the need for a number of skills is becoming more and more urgent.

With the introduction of technical subjects in the first 3-year cycle of general secondary education and with better vocational guidance, it is expected that more and more pupils will be diverted to technical specializations. To encourage such a development, facilities will be provided for accommodating more students in specializations regarded as best serving the needs of the economy. Finally, special legislation will, if necessary, be introduced regulating technical education and safeguarding the professional standards of technical school graduates.

A number of Technological Gymnasia in various towns and major rural areas of a three-year cycle of education will be established. At the same time the first three-year cycle of the existing Technical and Vocational Schools will be transformed into a " Technological Gymnasium ". Technological Gymnasia will help raise the educational standard of rural areas, decongest urban areas and Technical-Vocational Schools, and in addition provide general-technical education to more people. This broad technical-general education will enable students to determine and develop their aptitudes for particular specializations which they may pursue in the upper three-year cycle mainly of Technical and Vocational Schools. It is estimated that expenditure of the order of £300,000 will be incurred for this project during the period of the Second Five-Year Plan.

Existing Technical, Vocational and Agricultural Schools will be extended and become better equipped to accommodate more students directly or through Technological and General Gymnasia for particular specializations. A sum of £210,000 has been earmarked for this purpose. Similarly, the introduction of technical subjects to General Gymnasia will necessitate the erection of new laboratories and the provision of new equipment and staff. A sum of £150,000 has been allocated for this purpose.

A series of measures will also be taken designed to raise the standard of technical school graduates. The curricula of technical schools are currently under revision and an effort will be made to adhere as far as possible to international standards. A system of sandwich courses will be introduced, which will require graduates, before being granted their diplomas, to serve in industry for a period of time. This will raise the standard and help graduates attain higher professional status.

There is also the problem of staffing of technical schools. It is expected that the establishment of the Higher Technical Institute, which will provide higher technicians for industry and instructors for technical education, will ultimately solve the problem, but in the meantime short-term solutions will have to be sought probably through the engagement of part-time instructors from industry.

9.4 Post-secondary and Other Education

During the early years of the Plan, a Higher Technical Institute will be established. More details about this school, which will provide higher level technicians for industry and instructors for technical schools, are given in Chapter 4 C. Here reference will be made to the Cyprus Paedagogical Academy and other educational activities.

As indicated elsewhere, it is one of the objectives of this Plan to create the prerequisites which will, *inter alia*, enable an improvement in the conditions of service of teachers. At the same time, the standard of the teacher will be raised. This is expected to improve the quality of entrants to the Paedagogigal Academy and of the whole teaching profession. In this connection, the establishment of a boarding-house within the compound of the Academy is under consideration.

The School T.V. programmes, inaugurated in the last year of the First Plan, will be continued and extended and so will out of school education.

Finally, a new school for the Deaf and Dumb will be built at an estimated cost of £80,000.

In order to avoid repetition, the future development of a number of other educational institutions has not been touched upon in this Chapter. The activities of the Cyprus Productivity Centre, the Apprenticeship Training Scheme, the Institute for Hotel and Catering Personnel and the School of Public Administration are dealt with in Chapter 4 C. The School of Nursing and the Vocational Rehabilitation of the Disabled Centre are examined in Chapter 14. Finally, the Reform School is dealt with in Chapter 18.

9.5 Cultural Development

Almost £1 million has been allocated for this purpose ; and this amount does not include contributions to various cultural organizations or organizations carrying out cultural activities (e.g. subsidies to C.B.C.) which will be continued. Among the main projects envisaged are : a Public Stadium, a Public Library and Gallery and a Mobile Lending Library. In addition, consideration will be given to the establishment of a State Theatre and a State Orchestra.

9.6 Legislation

Future development will necessitate the introduction of appropriate legislation so that the general purpose and objectives of all levels and types of education (including private education), its structure, the types of schools, their staffing and equipment, their administration and functioning may be regulated in the public interest. Moreover, legislation relating to Athletics and Sports, State Theatre, State and Communal Libraries etc. may be needed to deal with such matters as organization, management, control and financing of these cultural activities.

9.7 Summary of Development Expenditure on Educational and Cultural Development, 1967–71

	£ 000
1. Elementary Education (incl. a New School for the Deaf and Dumb)	1,000
2. Secondary Education, General	300
3. Technical Education	660
4. Cultural Development	980
5. Other	60
Total	3,000

These development expenditures do not include other expenditures on education, e.g. on salaries, running expenses etc. for which provision is made in the Ordinary Budget.

CHAPTER 16

LABOUR AND SOCIAL INSURANCE

1. The First Five-Year Plan

1.1 Main Objectives

The main objectives in the field of labour and social insurance of the First Plan were :

(i) the satisfaction of certain basic rights and fundamental freedoms of workers ; and (ii) the establishment of such conditions as would enable the attainment of sustained economic growth, rising living standards and an equitable income distribution. These general objectives were to be pursued through the following means : (*a*) full employment ; (*b*) improved social benefits ; (*c*) freedom of association ; (*d*) industrial peace ; (*e*) protection against arbitrary dismissal ; (*f*) safety at work ; and (*g*) increased productivity.

1.2 Progress during the First Plan

(a) Full Employment

As a result of the implementation of the Plan, unemployment has been steadily declining. In 1961 the number of unemployed represented about 3 per cent of the economically active population. By 1966 this percentage had been reduced to 1.4 (¹). Similarly, the number of emigrants was reduced from 13,489 in 1961 to 3,408 in 1966.

(b) Improved Social Benefits

In 1964 the Social Insurance Scheme was amended to provide for (*a*) the inclusion of every working person in the Island (including employers, farmers and agricultural workers)—or an additional 40,000 beneficiaries—to the Scheme ; (*b*) the consolidation of the Workers' Compensation Law with the Social Insurance Law, and thereby the payment for industrial injuries to participants in the Scheme. Industrial injuries are now compensated at a minimum of 390 per cent higher rates than in 1963, *i.e.* from £800 in 1963 to a minimum of £3,120 under the new scheme ; (*c*) an increase in Social Insurance benefits by 50 per cent ; and (*d*) the improvement of the Pneumoconiosis Law, and the increase by 19.1 per cent of the benefits paid under it—from £20.150 to £24 per month for 100 per cent disability.

The total number of persons insured under the new Social Insurance Law is now about 50 per cent higher than those insured in 1961. The aggregate amount of contributions to and

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(¹) See footnote (²) on page 27.

other income of the Social Insurance Fund has risen from £691,854 in 1961 to £2,168,436 in 1966, whereas payments of social insurance benefits were £300,609 in 1961 and £914,056 in 1966.

(*c*) *Freedom of Association*

The legislation relating to trade unions was amended so as (i) to make it possible for workers and employers to join freely the organizations of their own choice, and (ii) to confer complete autonomy in the management and running of the affairs of workers' organizations.

(*d*) *Industrial Peace*

Man-days lost because of work stoppages through strikes and lock-outs fell from 21,267 in 1961 (27,005 in 1960) to 2,708 in 1966. This figure compared to the total man-days worked is among the lowest in the World.

(*e*) *Arbitrary Dismissals and Terminal Awards*

To safeguard the rights of workers against termination of employment on the initiative of the employer, legislation has been initiated which is intended to remedy one of the deep-seated worries of the worker—the fear of arbitrary dismissal or discharge in case of redundancy.(¹)

(*f*) *Workers' Safety at Work*

Appreciable progress was also made in the field of workers' safety in industry. Under the revised Mines and Quarries Regulations, safety committees in every mine and quarry have been established which have helped in the prevention of accidents and loss of life. Similarly, under the Building Regulations the Minister of Labour has appointed safety inspectors within construction companies. Safety on a national level has been promoted through organizing safety councils and conducting safety campaigns. Through all these measures workers safety has in general been enhanced.

(*g*) *Productivity*

In order to promote management development and raise workers' skills, the Cyprus Productivity Centre was established in 1963 as a joint UN–Government venture. The total cost of the project over its four and a half year life period was in the region of £500,000. An Apprenticeship Scheme was also initiated in 1963. By 1966, about 270 apprentices had been trained under this scheme, about 7 per cent of the total number of apprentices in employment.

(¹) Relevant legislation has already been put into operation. See paragraph 3.2.

2. Policy and Objectives in the Second Plan

The policy and objectives in the field of labour and social insurance during the period of the Second Plan will be governed by the following principles :

(i) Any additional or improved social insurance benefits should not be subsidized by the State, but should be earned through the work and the contribution of both employers and employees.

(ii) Improved social and economic benefits should be the concern not of individual employers *vis-a-vis* their employees but rather the collective responsibility of the entire class of employers, *vis-a-vis* the entire class of employees in the form of a system of collective insurance.

(iii) Government has a responsibility to ensure an equitable distribution of the increase in national income as between the various factors of production.

(iv) Any additional social benefits should be warranted by the growth in national income.

(v) Wage and salary increases should be in line with the overall growth in productivity. Of fundamental importance, therefore, for further social advances will be the growth in production and the increase in productivity. Government is cognizant of the need to provide increased social services and benefits to the people, but at the same time Government realizes that it will be necessary for the economy to grow enough to justify the provision of such services and benefits. In this respect the contribution of labour as a factor of production is of decisive importance and for this reason it is necessary that this factor should not only be fully utilized but that it should be used efficiently. The corollary to this is that the objective of employment policy should be not full employment, but most productive employment. During the period of the Second Plan there will, thus, be a shift towards more extensive training and up-grading of the labour force.

The institutions which will help in raising labour productivity are described in Chapter 4 C. In the remaining part of this Chapter a number of legislative measures of a social and economic nature will be outlined which will be conducive to the equitable distribution of the product of increased productivity and which are expected to raise further living standards.

3. Proposed Legislative Measures of a Social and Economic Nature

3.1 Overall Social Security Scheme ; Supplementary Pensions/Wage Related

A multiplicity of unrelated and un-coordinated schemes presently exist in industry for the provision of social and economic benefits to the working population. In 1962 there were a total of 90 different independent Provident Funds offering a variety of benefits to 13,350 contributors. Their number has since increased to 180, covering approximately 30,000 contributors.

The principles under which these funds are created and operated differ in more than one way : in the amount of employer and employee contributions, in the scope and nature of benefits, in the conditions of eligibility for various benefits, and in the method of their administration. As a consequence, employers are generally unevenly burdened and some of them are not charged at all for provident fund benefits ; a substantial portion of employees enjoy no provident fund or superannuation benefits of any sort, while others enjoy benefits of varying magnitudes. In the result the economy sustains inordinate administrative costs while the fragmentation of contributions minimizes the benefits to employees.

It is anticipated that it will be possible towards the end of the Plan period to introduce an overall social security scheme which would merge and unify existing *ad hoc* arrangements and enable the provision of economically and financially feasible social security benefits.

The possibility of introducing a wage-related supplementary pension scheme for all workers will also be studied.

3.2 Termination of Employment Law

Industrial development over the last few years, the need for modernization of production and distribution and the advent of mechanization and automation, all in themselves dynamic changes indispensable for rapid growth, have convinced the Government that measures should be taken to cushion the repercussions that would be generated by inevitable job displacements and redundancy.

To deal effectively with these developments legislation on the " Termination of Employment " will be introduced which will provide for the creation of a central Redundancy Fund whose revenue will be derived from contributions to be made by the employers. It is estimated that the resources of the fund will suffice for the payment of redundancy compensations. This Law is expected to come into operation in 1968.

3.3 Annual Holidays with Pay

To regularise existing arrangements for the collection and distribution of moneys for annual leave entitlements and in order to extend this benefit to all workers, the Government plans to introduce legislation on Annual Holidays. The 1st August, 1967, has been fixed as the date for the introduction of this scheme which is expected in the coming years to have also an impact on the development of internal tourism(1).

3.4 Medical Care

The possibility of providing medical care to Social Insurance beneficiaries and their dependants is being studied. Shortages in technical and medical staff, however, render the introduction of this scheme before the end of the Plan period almost impossible.

3.5 Invalidity Benefits under the Social Insurance Scheme

Prospects exist for the extension of the Scheme, within the next five years, to cover Invalidity Benefits. The required data for carrying out a detailed feasibility study are being collected.

3.6 Trade Standards

Consideration will be given to the introduction of trade standards.

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(1) The legislation has already been enacted.

CHAPTER 17

WELFARE

1. The First Five-Year Plan

1.1 Objectives of the First Plan

In the field of Welfare Services the aims of the First Five-Year Plan were rather moderate. The Plan provided for the continuation and, where possible, the expansion and improvement of services and activities initiated by the Colonial Administration. In particular, efforts were mainly geared towards the restorative aspect of social welfare with particular emphasis on the protection of children and the treatment of maladjustment.

1.2 Progress during the First Plan

The progress made may briefly be summarised as follows :—

Institutions. A new Children's Home was established in Nicosia to meet a pressing need for the accommodation of children in need of care. Premises were also constructed in Famagusta for the same purpose. A new hostel for adolescent boys was established in Famagusta and premises were erected or extended for the Hostels of Nicosia and Paphos. Finally, a hostel for maladjusted girls was established in Nicosia to accommodate and train adolescent girls presenting behaviour problems.

Increase of Public Assistance. The number of people regularly benefiting from Public Assistance increased from 3,339 in 1961 (2,411 in 1960) to 3,504 in 1966, whereas the actual amount of money paid in 1966 was in the region of £165,000 as against about £155,000 paid in 1961 (£143,000 in 1960). The introduction of regulations and standard rates made it possible to achieve a more rational distribution of assistance but the absence of social studies and surveys on family living standards has not permitted the establishment of minimum subsistence levels.

Staff Development and Administration. Progress was made in the training of staff. A retraining scheme was initiated with UNICEF assistance and through the services of an adviser who organized and conducted special courses for all officers of the Welfare Department and for officers of other voluntary organizations engaged in the field of child and family welfare. In addition, officers of the Department were granted fellowships for post-graduate or specialised training in social work.

Community Organization. The traditional community-consciousness of Cypriots and their highly developed sense of charitable responsibility towards the society had to be tapped and suitably mobilized. To this end financial and technical assistance to a number of charitable voluntary organizations was introduced.

2. Objectives and Policy under the Second Five-Year Plan

2.1 General Objectives and Policy

The cumulative increase of a class of dependent citizens who do not participate and do not share in the benefits of increasing production is likely to develop into a serious retarding factor on economic growth. Not only do such people draw cumulatively larger and larger proportions of the economic gain, but they also adversely affect the economy and economic development by upsetting and deteriorating social organization (mental illness, crime, social maladjustment, etc.)

Thus the objectives of the Plan in this field are twofold : Firstly, to prevent the creation of a section of the population from becoming dependent on the economy and to restore to normal living citizens those whose behaviour displays antisocial tendencies or maladjustment ; and secondly, to satisfy and safeguard the rights of citizens in general to decent standards of living. Both objectives will be pursued through the enactment of appropriate legislation, the expansion of public welfare services and the creation of necessary institutions as well as through the encouragement and support of the active participation of communities and private charitable organizations in social welfare activities.

2.2 Projects and Programmes of the Second Plan

The following are some of the projects and programmes through which the above objectives will be pursued during the Plan period :—

(*a*) *Income Maintenance—Research and Legislation*

Public assistance is now granted on the basis of administrative regulations. It is considered, however, that appropriate legislative provision is needed which will lay down the criteria for eligibility to such assistance. A study of family standards of living and minimum subsistence levels has already been undertaken. The findings of this study will be used as guidance for reorganizing the whole system of maintaining the income of disadvantaged citizens at reasonable levels. In the light of the findings of this study new criteria for eligibility to assistance will be established. No change will, however, be introduced before an actuarial study takes place to assess the financial feasibility of the scheme.

(*b*) *Registration and Inspection of Day Nurseries, Child Minders and Voluntary Homes*

With the increasing participation of women in the labour force, many children are now placed with private day care centres, foster homes and child minders. The expansion of these services will be encouraged because of their useful role in the development effort. The existing legislation providing for inspection and licensing of day nurseries will be strengthened and strictly implemented. In this way, it is expected that the following favourable results will emerge: (i) protection of children from unsatisfactory placements and against neglect or ill-treatment; (ii) raising of the standards of day-care and fostercare agencies; and (iii) prevention of the rejection of children by parents and forestalling of family disorganization.

(*c*) *Amendment of the Adoption Law, Children's Law and Juvenile Offenders Law*

It is proposed to amend the Adoption Law in order to ensure increased safeguards for the welfare and rights of children placed for adoption. Similarly, the Children's Law will be revised and amended in order to provide additional measures and guarantees for the protection and treatment of children.

One of the consequences of rapid social change is the increase of crime and anti-social behaviour especially among juveniles. To combat and forestall the unfavourable repercussions of crime upon social and economic development it is necessary to review and re-adjust measures of social defence. Thus, the revision and amendment of the Juvenile Offenders' Law will be pursued as part of an overall plan to reform the penal system and lay greater emphasis upon the reformative rather than the punitive aspects of treatment of offenders.

(*d*) *Construction of Premises for Welfare Institutions*

In order to enable Welfare Institutions to work smoothly it is considered desirable to increase the number of premises, as follows:—

(i) To build a Children's Home in Limassol in order to provide accommodation and care for deprived and homeless children and, thus, enable the proper functioning of the Home already operating in the town.

(ii) To build a Hostel for Maladjusted Girls in Nicosia to cater for difficult adolescent girls that present emotional maladjustment and delinquency tendencies. This institution is now accommodated in rented premises, which lack indoor and outdoor space for training, exercise and recreation.

(iii) To complete the extension works of the Boys' Hostel in Nicosia in order to improve and render more effective the services rendered to the boys and in order to increase its capacity to accommodate more boys.

(*e*) *Establishment of Youth Centres*

It is intended to introduce Youth Centres where services and amenities to the working youth will be provided and which will also serve as a medium for their social and cultural development and healthy social adjustment. Youth Centres will provide cheap mid-day meals, facilities for rest, play and recreation. In addition the centres will provide vocational guidance, job study and counselling.

(*f*) *Community Organization Services*

The existing fragmentation of community welfare organizations leads to waste of valuable funds because of lack of planning methods and technical knowledge for running voluntary welfare services. There is ample evidence of successful utilization of resources where there is close consultation with the Government Welfare Services. A specific Section is planned to be created with the broad objective of stimulating community awareness of social problems and providing technical and financial assistance for the planning, coordination, organization and administration of social welfare services in all communities. To this end, legislation will be introduced for the licensing of all voluntary community welfare organizations and the control of their fund-raising activities and budgets. This Section will also assist voluntary organizations to carry out demonstration projects of community action in areas of pressing need, such as Day Care Centres, Youth Clubs, etc.

The policy of providing grants-in-aid to Voluntary Organizations in order to encourage them to participate actively in the promotion of the social welfare of the needy members of Society will be continued.

CHAPTER 18

OTHER SOCIAL SERVICES

1. Introduction

In the previous chapters of this section the various aspects of development of social services have been discussed. In their broad scope and in a more general sense Social Services cover also such matters as Rural Development and Housing, which are dealt with in Chapters 5 and 10 respectively. In this Chapter reference will be made to the Administration of Justice and Correctional Institutions.

2. The First Five-Year Plan

2.1 The Administration of Justice and Connected Matters

After Independence it became necessary to make certain adjustments to the Courts and Legal Systems. The necessary changes in the Courts System were effected by the Courts of Justice Law, 1960, enacted in December, 1960. The system underwent a further revision by the enactment of the Administration of Justice (Miscellaneous Provisions) Law, 1964, in July, 1964. This Law amalgamated the High Court and the Supreme Constitutional Court into a single Supreme Court and provided that any case could be tried by any Judge, irrespective of whether the parties were Greeks or Turks. With regard to the Legal System, two new fields of law were introduced, namely " constitutional " and " administrative " law, which strictly speaking were not previously applied as such in Cyprus.

The legislation relating to the legal profession underwent a revision through the enactment of the Advocates (Amendment) Laws, 1961 and 1963, whereby citizens of the Republic holding legal qualifications from any recognised University, other than that of " Barrister at Law " of the British Inns of Court, are entitled to practice in Cyprus after succeeding in the Cyprus Local Bar Examinations and after having undergone a minimum practice in a Cypriot Registered Advocate's Chambers.

Another enactment under this heading was the making, in 1966, of Rules and Regulations establishing an Advocates' Pension Fund.

The Central Law Library in Nicosia and the Law Libraries in District Courts were enriched. Improvements were also introduced in the method of keeping and editing law reports.

Finally, a new Court House in Famagusta, the first Court House to be designed and erected as such in Cyprus, is nearing completion.

2.2 Prisons

The aim was to operate the prisons in a way which would enable them to fulfill their true objective, namely that of reformation and rehabilitation of prisoners. In order to achieve this objective administrative and legislative measures were taken, designed to raise the standard of the prison staff, to eliminate corruptive influences in prisons through the intermixing of various categories of prisoners, to ensure healthier utilization of leisure by the provision of libraries and reading rooms, etc, and finally to improve educational and vocational training facilities. A new wage-earning scheme, based on the principle of "better pay for better work" and the inclusion of prisoners in the Social Insurance Scheme were significant steps in the achievement of the desired objectives.

2.3 Reform School

In order to improve the reformation, corrective training and rehabilitation of young boys below the age of 16 committed to the Reform School, improved means of educational and vocational training in the form of equipment and facilities of instruction and the enlargement of the scope of trade training were introduced. Furthermore, regular visits to the School by the Clinical Psychologist, the Welfare Officers and members of the Judiciary were arranged and the participation in out-of-school activities by the boys was encouraged to an even greater degree. The staff were afforded opportunities for specialized training abroad.

3. The Second Five-Year Plan

3.1 Administration of Justice

The primary objectives will continue to be the maintenance of a very high standard of justice, the safeguarding of the integrity and independence of the Judiciary thereby securing the smooth, fair, just and equitable administration of justice. These objectives will be achieved by :

(i) Further improvements to the system of administration of Justice and to the legal system.

(ii) The introduction of legislation on matters connected with the administration of Justice, and the improvement of the means used in the administration of Justice (Court Libraries, Law Reports and methods of keeping Court proceedings and legal records).

(iii) The provision of proper Court buildings.

3.2 The Treatment of Offenders and Correctional Institutions

The policy within this field will be to improve further the methods and means of operation of the present institutions and to bring the legislation governing the treatment of offenders up to date. Analytically, the objectives and policy measures in this respect are :

(*a*) *Prisons and Young Offenders' Training Centre*

In accordance with modern concepts, emphasis will be placed on the corrective rather than the punitive aspect of reform. Thus, practical, mainly administrative, measures will be introduced to ensure that prisoners, especially the young offenders, receive the best possible vocational training and are given the opportunity to live in an environment where conditions are similar to normal conditions of society. Similarly existing equipment and facilities used for training will be improved. Furthermore, a separate Young Offenders Institution will be established to enable young offenders between the ages of 16 and 21 to be separated entirely from adult prisoners and to be given completely different treatment from hard core criminals.

Healthier utilization of leisure will be ensured by the enrichment of libraries, organization and participation of inmates in various functions and training in social behaviour. The welfare and aftercare methods for raising the inmates' standard of living will be extended. Finally, prison buildings will be improved.

(*b*) *Reform School*

The main objective of this institution, *i.e.* corrective training reformation and rehabilitation of boys committed below the age of 16, will be pursued through the application of more sophisticated concepts and methods. The establishment of a " Privilege House ", as a stepping stone to society is one illustration of the projects in mind.

Educational facilities and equipment will be made available to the Lapithos Reform School to enable it to enhance the already high standard of work performed there. The training abroad of additional teaching staff in modern techniques of corrective and reform work will be pursued as a fundamental part of this policy.

(*c*) *Legislation on the Treatment of Offenders*

Legislation will be enacted which will have as its main objective the bringing of existing legislative provisions in line with modern concepts regarding treatment of offenders, namely, the reformation of prisoners by restoring self-respect, engendering self-confidence and providing them with the means to develop their latent good qualities and earn their living. In this connection legislation will be considered relating to the introduction of a system of indeterminate, suspended and conditional sentences, of " open prison ", pre-release and parole systems and of proper machinery for examination and revision of long sentences.

The treatment of specific classes of offenders, such as drug addicts and criminal mental patients, will also be further regulated.

3.3 Other Objectives

Legal and social research studies will be conducted designed to establish the desirability and advisability of law reform in such fields as capital punishment, criminal responsibility, the defence of insanity, the interpretation of Laws, etc. Efforts will also be made to follow up the enforcement and implementation of legislation generally. There are at present Laws on the Statute Book which are not enforced, either because of practical difficulties in their implementation or for other reasons. A comprehensive programme of consolidation and revision of statutes will also be undertaken. Another objective of legal research is to improve the method of keeping criminal, court and other legal statistics from which reliable conclusions may be drawn with regard to criminal tendencies and methods of treatment. Within the ambit of improving the means of keeping official records and assisting statistical research and organization, efforts will be made to establish a " Public Records Office ", in which such important documents as Treaties and Conventions to which Cyprus has acceded will be kept and classified and be easily accessible for reference and consultation.

4. Development Expenditure, 1967–1971

Development expenditure allocations for other social services during the Plan period are appended below :—

Development Expenditure for Other Social Services, 1967–1971

	£ 000
Construction of New and Improvements to Existing Court Buildings	185
Repairs and Improvements to Prisons, including the Establishment of a Young Offenders' Institution ..	45
Other (including Reform School, Court Libraries, Miscellaneous, etc.)	20
Total	250

PART IV

The Planning and Administrative Set-up

1. The Existing Machinery of Planning

1.1 Planning Machinery

A Planning Machinery was set up for the first time in Cyprus in June, 1961, under a decision of the Council of Ministers. Ever since it has gone through important organizational changes which were designed to enhance its effectiveness and efficiency. As it stands to-day, the Machinery consists of a number of Committees and organs operating at different tiers of authority, each Committee performing different functions. The present set-up is diagrammatically depicted in the Organizational Chart opposite.

The component parts of the Planning Machinery and their functions are as follows :—

1.2 The Central Planning Commission

The Central Planning Commission is the Central Planning Agency lying at the apex of the planning structure. It is headed by the President of the Republic and includes five Ministers the activities of whose Ministries are closely related to economic and social development (Finance, Agriculture, Commerce and Industry, Labour and Social Insurance, Communications and Works). The Governor of the Central Bank participates in the deliberations of the Commission's meetings as an attending member. The Director-General of the Planning Bureau is the Secretary to the Commission. This supreme governmental body, entirely political in its membership, has overall responsibility not only for the formulation of the economic and social objectives of the Government, the laying down of the goals and targets of the Plan, the issue and coordination of policy decisions and directives necessary to achieve the Plan's targets, but also for overseeing the implementation of the Plan and ensuring its timely and coordinated execution. In order that it should be effective, the Central Planning Agency must have authority and prestige, and it was in line with this principle that the existing organizational arrangement was designed to give the planning effort the full support and backing of the political leadership and the Chief Executive. While such support does not in itself necessarily guarantee the success of economic planning, it is nevertheless an essential prerequisite to success.

ORGANIZATIONAL CHART OF THE PLANNING MACHINERY

Central Planning Commission

Composition :

President of the Republic (Chairman).
Minister of Finance.
Minister of Commerce and Industry.
Minister of Agriculture and Natural Resources.
Minister of Communications and Works.
Minister of Labour and Social Insurance.
Director-General, Planning Bureau (Secretary).
Governor of the Central Bank (in attendance).

Functions :

Overall responsibility for the preparation and implementation of the Plan and the issue of relevant policy directives.

Planning (or Working) Committees

POLICY COMMITTEE :

Functions :

Advising on the formulation of the Plan, on the formulation of economic policies and the introduction of relevant legislation.

Composition :

Minister of Finance (Chairman).
Director-General, Planning Bureau.
Director-General, Ministry of Commerce and Industry.
Director-General, Ministry of Labour and Social Insurance.
Director, Department of Agriculture.
Manager, Economic Research Department, Central Bank of Cyprus.

BUDGET COMMITTEE :

Functions :

Entrusted with the preparation and supervision of the implementation of the Annual Development Budget on the basis of the targets approved by the Planning Commission. Other matters affecting the Public Sector.

Composition :

Minister of Finance (Chairman).
Director-General, Planning Bureau.
Accountant-General.
Director-General, Ministry of the Interior.
Director-General, Ministry of Communications and Works.
Director-General, Ministry of Agriculture and Natural Resources.

Planning Bureau

Consultative Committees

1.3 The Two Planning (or Working) Committees

These lie at the second tier of authority in the planning set-up. These are :—

(*a*) *The Planning Committee* (*Policy*), which is entrusted with the task of giving advice on the formulation of the long-term plan and on plans and projects prepared by Ministries and the Planning Bureau, proposing appropriate investment and growth targets, recommending relevant economic policies and suggesting legislative and other measures aiming at the fulfilment of these targets. This Committee is composed of :—

—The Minister of Finance (Chairman),

—The Director-General, Planning Bureau (who acts as Chairman of the Committee when the Minister of Finance is unable to attend the Committee's meetings),

—The Director-General, Ministry of Commerce and Industry,

—The Director-General, Ministry of Labour and Social Insurance,

—The Director, Department of Agriculture,

—The Manager, Economic Research Department, Central Bank of Cyprus.

(*b*) *The Planning Committee* (*Budget*), which is responsible for the preparation of the Annual Development Budget on the basis of set targets and objectives, for overall supervision of its implementation and for all relevant issues connected mainly with the public sector. Its composition is as follows :—

—The Minister of Finance (Chairman),

—The Director-General, Planning Bureau (who again acts as Chairman of the Committee, when the Minister of Finance is unable to attend the Committee's meetings),

—The Director-General, Ministry of Communications and Works,

—The Director-General, Ministry of the Interior,

—The Director-General, Ministry of Agriculture and Natural Resources,

—The Accountant-General

When there are topics or issues falling within the jurisdiction of both committees, these are discussed by the two Planning Committees in plenary session.

Two important features pertaining to the composition of these Committees should be pointed out :—

(i) *They are headed by the Minister of Finance.* This arrangement ensures close liaison and coordination between the

Planning Agency and the Ministry of Finance and facilitates the unhindered financing and implementation of the Plan. Thus, although the Planning Organization retains its independence, once the Plan is approved no serious problem arises in regard to the provision of the funds needed for its implementation (at least in so far as the Government sector is concerned). In view of his special position in the planning set-up, the Minister of Finance ensures the preparation of realistic Development Budgets, in so far as the financing aspect is concerned, and once the Budgets are approved, he is committed to provide the funds.

(ii) *The Directors-General of virtually all the Ministries concerned with Development Activities are members of the Planning Committee.* The two main reasons for this organizational arrangement are : First, to minimise the possibility of conflict of authority and the creation of antagonistic tendencies and feelings between individual Ministries and the Planning Agency. Through the participation of the top civil servants in the planning process the danger that planning officials might be tempted to impose their viewpoint by virtue of their authority rather than through a process of discussion and consultation is minimized. The second, equally if not more important, reason for this wide representation on the Planning Committee is the fact that the Plan or the Development Budget is implemented not by the Planning Agency itself, but by Ministries and Government Departments and the best way to ensure acceptance of the Plan and of the public investment programme is to associate authoritative representatives of such Ministries or Departments with their formulation.

1.4 The Consultative Committees

In a free enterprise economy the success of economic development planning depends to a great extent on the existence of a constructive relationship between Governmental planning and private decision-making ; and this is the more so in the case of Cyprus where the contribution of the private sector to economic development is of vital importance. Confidence in the economic development plan can be strengthened and more easily secured if representatives of private enterprise, trade unions and other groups and organizations are consulted so that they may participate in the planning process. Through such a participation the private sector can acquire a sense of voluntary commitment to achieving the broad goals and objectives of the Plan.

In connection with the First Plan, " Functional " (Advisory) Committees (in which there was some private participation) were appointed but for various reasons their usefulness proved in practice to be limited. During the preparation of the Second Five-Year Plan these Functional Committees were replaced by Consultative Committees, chaired mainly by the Directors-General of the Ministries and consisting of Government representatives, Employers' and Employees' delegates and individual experts in their personal capacity on account of their specific professional or special qualifications or their experience in each particular sector. Ten Consultative Committees were appointed covering the following main subjects :—

1. Agricultural Development ; (including Animal Husbandry, Forest Development, Veterinary Services, Fisheries Development, Water Development and Agricultural Research)
2. Industrial Development (including Electricity)
3. Construction Industry
4. Transport and Communications
5. Trade and Export Promotion
6. Tourist Development
7. Social Development (including Physical Planning)
8. Education and Manpower
9. Money, Finance, Prices and Incomes
10. Productivity and Technology.

The main functions of these Committees are : to make suggestions for economic development ; to channel information on long-term and current production problems on past investment and new needs for investment, to appraise forecasts regarding market trends and potentialities, labour supply and demand prospects ; to furnish advice and suggestions on policy matters, etc.

Officers from the Planning Bureau prepare introductory studies outlining sectoral targets and objectives during the Plan period, the problems posed and the policy and other measures needed to attain those objectives. These studies constitute the basis for the Committees' deliberations and discussions and raise issues on which especially the private sector's views and comments are sought.

1.5 The Planning Bureau

The Planning Bureau is the economic and administrative arm of the Central Planning Commission and the two Planning Committees. It is staffed with economists and administrators. It is independent and answerable to the Chairman of the Central Planning Commission. In practice it operates through the Minister of Finance in his capacity as Chairman of the Planning Committees.

Organization and Structure of the Planning Bureau

The Bureau is headed by a Director-General, who has responsibility for the preparation of overall, regional and sectoral plans for the balanced development of the Island's economy and for the timely implementation of such plans. He is also the co-ordinator of development work carried out by Ministries, Departments and Statutory Corporations. He is the Secretary of the Central Planning Commission and acts as Chairman of the Planning Committees in the absence of the Minister of Finance.

The Planning Bureau is divided into two main sections :—

(*A*) *The Planning Section, which is responsible for—*

- (i) formulating policies in regard to short-term and long-term economic and social development ;
- (ii) conducting economic and social research and analysis necessary for the preparation of short-term and long-term plans ;
- (iii) the preparation and co-ordination of inter-sectoral and sectoral programmes, and for synthesizing them into overall economic plans ;
- (iv) formulating and suggesting policies necessary to implement the plans ;
- (v) preparing, appraising or evaluating in consultation with Ministries and Government Departments, projects recommended or submitted by Ministries in order to ensure their consistency with plan objectives, policies, and targets ; and
- (vi) cooperating in the preparation of the Annual Development Budget.

(*B*) *The Co-ordination, Executive and Technical Assistance Section*, which is entrusted with the following tasks :

- (i) Preparing, in cooperation with the Planning Section, the Annual Development Budget ;
- (ii) coordinating the implementation of the long-term plans and the Annual Development Plan as well as the development activities of Ministries, Public Corporations, etc. ;
- (iii) supervising and controlling the implementation of approved investment and other projects included in the Plan and the Annual Development Budgets ;
- (iv) preparing quarterly progress reports on the fulfilment of the plan objectives and the implementation of the public development programmes and suggesting measures for the removal of bottlenecks impeding plan implementation ;

(v) preparing, in cooperation with the Planning Section, explanatory memoranda, and providing secretariat, to the Working Committees and the Central Planning Commission, following up and coordinating the implementation of the Committees' and the Commission's decisions ; and

(vi) preparing requests for technical and economic assistance to Cyprus in the form of experts, scholarships, training courses, credits, grants, etc. from multilateral and bilateral sources and coordinating the acquisition and use of such foreign aid.

2. The Planning Process

Briefly, the planning process goes through the following phases :

(*a*) A from-the-top-down phase which involves the preparation by the Planning Bureau of an overall global study of the economy. (In the case of the Second Plan a small econometric model was prepared for this purpose). The purpose of this exercise is to estimate and project the main economic magnitudes, to examine in broad terms alternative paths of growth and the possibilities open as well as the implications on the main constraints.

(*b*) The choice by the political authority from among the alternatives of the " best " solution.

(*c*) A from-the-bottom-up phase during which a more detailed analysis is undertaken by the Planning Bureau and sectoral studies are carried out with the object of testing the feasibility or otherwise of the targets set. An effort is made to get an insight into every sector so as to verify the original assumptions. The evolution of output is assessed, domestic and export market possibilities are studied, investment and labour requirements are examined, etc. At this stage Ministries, Government Departments, Public Corporations, etc. are asked to submit project proposals, data, their own assessment of the possibilities in their particular field or sector, policy recommendations, etc.

(*d*) Discussions in the Consultative Committees of sectoral and intersectoral plan proposals.

(*e*) A synthesising process by the Planning Bureau whereby an effort is made to match the from-the-top-down and from-the-bottom-up estimates and the recommendations of the Consultative Committees in order to produce a consistent and efficient Plan.

(*f*) The drafting of the Plan and its submission for consideration and final approval by the Council of Ministers.

3. Plan Co-ordination

A good plan is essentially made up of consistent, co-ordinated and closely interwoven programmes and policies aimed at achieving established goals and objectives. This underlines the importance of plan co-ordination. In Cyprus the function of co-ordination is performed at different levels. At the lowest level on a district basis an effort is made to ensure some kind of co-ordination in the implementation of the development programme by District Co-ordination Committees chaired by the District Officer and consisting of Departmental Heads of the various Ministries in the District. At the second layer co-ordination is exercised by the Directors-General of Ministries who co-ordinate all development activities of the various Departments coming under the jurisdiction of each Ministry. At a still higher level the function of co-ordination both with regard to plan preparation and plan implementation is performed by the Planning Bureau and the Planning Committees (under the overall supervision of the Central Planning Commission). Since all projects and policy proposals, irrespective of the Ministry from which they emanate, have to be processed through and be evaluated by the staff of the Bureau and then submitted for discussion by the Planning Committees in which the Directors-General participate, the task of co-ordination becomes easier and more effective. This continuous dialogue between the officials of the Planning organization and the top administrators and technicians of the executive Ministries has not only created a spirit of co-operation, but has also inculcated a " development mentality " and created a " development consciousness " which have facilitated the planning effort.

4. Plan Implementation

A development plan remains an academic exercise unless effective steps are taken for its implementation. It is therefore important to ensure that the required machinery is available for this purpose and that any organizational and institutional changes needed are introduced. In Cyprus, Government development projects are, as a general rule, implemented by the Technical Departments of Ministries. Project implementation is, however, very closely followed up by the Planning Bureau to which Ministries and Departments submit regular monthly progress reports indicating the main projects whose execution falls behind schedule. These reports are scrutinized by the Planning Bureau and every possible effort is made to remove administrative, legal, technical, organizational and other bottlenecks impeding plan implementation. Delays are referred to the Central Planning Commission or to its Chairman at quarterly intervals so as to ensure speedier project execution.

5. Evaluation of the Planning Function

Operating in virtue of the authority vested in them by the Central Planning Commission and having the full support and backing of the political leadership the Planning Bureau and the Planning Committees have acquired the respect and co-operation of Ministries as well as of the private sector. And, because of the participation of the Directors-General of Ministries, the planning function has been viewed as a co-operative effort and no conflict of authority between the Bureau and the Ministries has arisen. This spirit of understanding has facilitated in no small measure the success of the planning function in Cyprus.

6. Suggestions for Improvements

The success of the planning function described in the preceding sections should not give the impression that a state of perfection has been reached, that no problems are being encountered, that there are no weaknesses in the existing structure and that there is, therefore, no scope for improvement. After all, Cyprus experience with economic development planning is very limited extending as it does over a period of only six years. The following are some of the areas in which action for improvement appears to be called for :

6.1 The Need to Strengthen the Government Statistical Services

Knowledge of past trends of economic variables is essential for planning the future. To examine past trends, however, the planners must have available sufficient and accurate statistical information. Planning on the basis of inaccurate data might be worse than no planning at all, since such inadequate and inaccurate data may not only point to the wrong solutions, but may also create a false sense of complacency and lead to serious bottlenecks and rigidities. Primary responsibility for conducting of surveys and censuses and for the collection and compilation of statistical data rests with the Department of Statistics and Research which comes under the jurisdiction of the Ministry of Finance, but statistical information is also collected and compiled by other Ministries, *i.e.* the Ministry of Labour and Social Insurance, (manpower surveys, employment and unemployment statistics) ; the Ministry of Agriculture and Natural Resources (agricultural statistics) ; the Ministry of Health, (vital and health statistics) etc. This diffusion of the statistical function among many Ministries resulted not only in a waste of resources, human and material, but sometimes also in the collection of statistical data of limited usefulness at a time when other essential data were lacking. There was, thus, an urgent need for the co-ordination of the statistical services. Things have improved since the establishment of a Central Statistics Coordination Committee under the chairmanship of the Director-General of the Planning Bureau. All proposals involving the collection of statistical data are now channelled to this Committee which decides on priorities. But there is still the problem of inadequacy of statistical data needed for planning purposes and for following up economic trends. This points to the need for strengthening the Department of Statistics and Research so that it may be able to meet not only the planning and general Government needs, but also the needs of an economy which will rely more and more on accurate statistical information. A Bill reorganizing the Government statistical services is now with the House of Representatives.

6.2 The Need for Strengthening Planning Sections in Individual Ministries

Experience during the First Plan period as well as in connection with the preparation of the Second Plan indicates the need for creating or strengthening planning units in major Ministries closely associated with the development plan. The absence of such planning units has been a shortcoming impeding the planning effort. The organizational structure of Ministries, and indeed of the whole Public Administration, was good enough for routine Governmental activities but inadequate for the tasks of accelerated economic development. No effective organizational structures existed to carry out the necessary surveys, technical studies, project preparation and evaluation, etc. The situation has improved ever since the launching of the First Plan, but there is much room for further improvement. It is felt that the establishment of well-organized planning units will improve the quality of project and sectoral programme preparation as well as the timely execution of programmes and projects. Such units would occupy a strategic position in the planning machinery. They may be composed of technical experts and economists from individual Ministries and be presided over either by the Minister himself or by the Director-General of the Ministry concerned. They will be the main link between the Ministry and the Planning Bureau and the chief organ at the Departmental or Ministerial level engaged in the process whereby sectoral programmes are evolved as part of the " planning-from-below-procedure ".

6.3 The Need for Local Government Reform

On a number of occasions, the first development programme ran into some difficulties at the local level. The participation of the people in the development effort is indispensable and such participation can only be ensured through institutional forms of representative Local Government. In the sphere of Local Government Cyprus has made little progress since independence. The existing shortcomings point to the need for introducing representative Local Government whereby the elected leaders of the people will channel the local representatives' viewpoint and have a say in the preparation and implementation of development programmes and projects having a particularly local significance (¹).

6.4 The Need for Improvements to the Main Planning Machinery

The Planning Machinery itself needs a new re-appraisal in the light of the experience gained since its establishment. Thus, although the planning functions have in theory been allocated to the various planning bodies, experience and practice have proved that the brunt of the burden of the planning effort has fallen on the shoulders of the Planning Bureau, a very small body, which has to deal not only with long-term planning and sector programming, progress review and project evaluation, coordination of the implementation of the development programme, foreign aid, preparation of the annual development budget, etc., but also with a big range of minor issues. In fact any matter which directly or indirectly, closely or remotely touches on development and which involves the disbursement of development funds finds its way to the Planning Bureau.

On the other hand Planning Committees consist of Directors-General and Heads of Departments who cannot devote much of their time to planning work as they are not engaged in the planning task on a full-time basis. Not only are these members engaged in tasks relating to the administration and coordination of the activities of their Ministries, but they are also occupied and overburdened with other duties (e.g. membership in several other Government Committees) which take up a substantial part of their time.

For these reasons, the existing planning structure is being re-examined with a view to devising ways and means whereby it can become more effective.

7. The Need for Administrative Reform—The Civil Service

The structure of the Civil Service has undergone very little change since Independence. However, with the heavy emphasis now placed on economic development and the changing role of the state in economic affairs, there is an urgent need to re-organize and adapt the structure of the Service so as to meet the requirements of a " development oriented " age. As the Minister of Finance has observed in a recent Budget Speech :—

" The State is no longer a mere executive organ and it would, therefore, be unfortunate if it were unable to compete

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(¹) The question of Local Government reform is currently being studied by a foreign expert.

with the private sector in securing the services of the best talent. The new role of the State should now be fully understood. The existing organisation and the salary structure are based on old principles emanating from the traditional activities and responsibilities of Government. Until the establishment of the Republic and for many decades the Government was largely concerned with the preservation of law and order and with tax collection. In a rapidly developing economy, however, such as the Cyprus economy, the role of the Civil Service changes in emphasis. A new structure is therefore necessary. A new type of civil servant must be created who will not only be able to implement laws and regulations, but who will also have adequate training, techno-economic knowledge and technological abilities. The civil servant is expected to be a more active contributor to social and economic development which is to-day conceived, formulated, promoted and implemented by the State. For this development orientation of the Civil Service a revision of the system of remuneration is also required so that the best should be attracted to the Service and those receiving special training and those distinguishing themselves should remain in it ".

Some of the reforms which appear to be urgently needed are :—

(i) Revision and streamlining of old practices and procedures with a view to enabling increased delegation of powers on the part of the top civil servants to the middle grades and the lower echelons of the service so that the Directors-General and Heads of Departments may be relieved of an enormous volume of routine time-consuming duties and, thus, be able to devote more of their time to matters of policy as well as to planning tasks.

(ii) Elimination of red-tape and antiquated procedures and inculcation into the administration of a business-like approach to problems with a view to increasing efficiency and productivity and enabling the successful carrying out of large action programmes. Modernization must make a large mark in such matters as general office organisation, filing, record-keeping, use of stationery, etc. Administrative reform must receive continuous attention through the establishment of an Organisation and Methods Division, which should have the required authority and expertise. To improve the efficiency of Government accounting and statistical services and to facilitate research, Government proposes to introduce modern computer and data processing equipment.

(iii) Revision of the existing conditions of service, including remuneration, so as to attract and retain in the Service candidates of a high calibre. The development programme on which the Island has embarked presents a real challenge which can only be met if the Civil Service manages to recruit and retain within its ranks the best available talent.

Satisfactory conditions of service, incentives and rewards for extra performance, and, in general, the introduction of more enlightened personnel policies will not only help to build up a contented Service, but will also assist in the harnessing to the full extent of the human qualities needed for the implementation of an ambitious development programme.

8. Outlook for the Future

To all those who have had some experience in plan preparation and implementation, it is obvious that an economic plan must inevitably make provision for the expansion, re-organization and development of administrative and executive capacity both in the public and the private sectors. Economic development is not a once-over attempt to increase output, but a continuous process. A five-year development plan should, therefore, be judged not only by its direct impact on output, but also by its indirect long-term effects on the building up of administrative capacity and by the adoption of policies leading to the creation of institutions which will have beneficial and lasting effects on the future productive capacity of the country. These principles have been borne in mind by the Cyprus planners and every effort has been and is being made to secure as far as possible a reasonable relationship between the dimensions of the development plan and the capacity of the Governmental machinery.

Considerable emphasis has also been placed on training for development. To this end long-term scholarship and training programmes have been drawn up and closely related to the new development projects and programmes. A large number of civil servants have already been sent abroad for training on specialized, post-graduate or under-graduate courses of study. The results of these training programmes will not of course be felt until after the lapse of some time. Gradually, however, the gaps in administrative and technical personnel are being filled.

Action has already been initiated towards reviewing the structure of the Civil Service. Foreign expert assistance has been obtained for this purpose and the revision is expected to be completed in the course of 1968. Efforts are also being made to revise the existing Government practices and procedures. A Public

Administration Expert is assisting the Government in this task and it is hoped that his recommendations will help streamline and modernise Governmental procedures and regulations and the promotion of efficiency and productivity in the functioning of the Government machinery.

Administration is an organic part of society and institutional structures are often embedded in the past and reflect the peculiarities of a particular country and are closely related to the ideological and social systems of the country. The Cyprus culture possesses ideologies and value systems which attach great importance to individual achievements and is very responsive to innovations, new ideas and new opportunities. Within such a cultural system the training programmes launched by the Government and the new institutions established are bound, slowly but surely, to bring good and lasting results in all spheres of activity, including public administration, and will no doubt make a valuable contribution to progress and development. The traditional outlook, old law and order concepts and rules of the thumb principles are giving way to a new rational approach to problems and the planning spirit is gradually being inculcated into all sections of the leading technocrats both in the public service and the private sector.